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BREEDERS' DIRECTORY.

Cards of four lines or less will be inserted in the Breeder's Directory for \$10 per year or \$5.00 for six months; each additional line, \$2.50 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

HORSES.

JOSEPH FUHRMAN, NORTH WICHITA, KAS.—Breeder of French Coach and Percheron horses. Pure-bred young stock, of both sexes, for sale; also, grade animals. Prices as low as same quality of stock can be had elsewhere. Time given if desired. Inspection invited. Letters promptly answered. Mention this paper.

PROSPECT FARM—CLYDESDALE STALLIONS, SHORT-HORN CATTLE, POLAND-CHINA HOGS. Write for prices of finest animals in Kansas. H. W. McAfee, Topeka, Kas.

CATTLE.

VALLEY GROVE HERD OF SHORT-HORNS.—For sale, choice young bulls and heifers at reasonable prices. Call on or address Thos. P. Babst, Dover, Kas.

NEOSHO VALLEY HERD OF SHORT-HORNS.—Imported Buconeer at head. Registered bulls, heifers and cows at bed-rock prices. D. P. Norton, Council Grove, Kas.

ENGLISH RED POLLED CATTLE AND COTSWOLD SHEEP.—Young stock for sale, pure-bloods and grades. Your orders solicited. Address L. K. Haseltine, Dorchester, Green Co., Mo.

SWINE.

OHIO IMPROVED CHESTER SWINE.—Pure-bred and registered. Twenty-five sows, mostly aged, bred for spring farrow. Orders solicited. H. S. Day, Dwight, Morris Co., Kas.

FOR SALE.—Duroc-Jersey pigs; also Poland-China. Bronze turkeys, Toulouse geese, Pekin ducks, Barred Plymouth Rock and Brown Leghorn chickens. Ready to ship out. J. M. Young, Liberty, Kas.

A. W. THEMANNSON, WATHENA, KAS.—Poland-China hogs. Glits bred to Graceful F. Sanders; he is by J. H. Sanders 27219 and out of Graceful F. 63408, by A. A. by Black U. S. Sire and dam both first-prize winners at World's Fair and descendants of Black U. S.

TOPEKA HERD OF BERKSHIRES.—Strong-framed, mellow and prolific. State fair prize-winners and their produce for sale. Also, Pekin ducks of enormous size. H. B. Cowles, Topeka, Kas.

SWINE.

V. B. HOWEY, Box 103, Topeka, Kas. breeder and shipper of thoroughbred Poland-China and English Berkshire swine and Silver-Laced Wyandotte chickens.

POLAND-CHINAS.—Dietrich & Gentry, Richmond, Kas., have a fine lot of fall hogs and sows and two very fine young sows bred that they will sell cheap. Breeding choice. Quality guaranteed. Write or come and see us.

FOR SALE CHEAP.—Choice Poland-China boar pigs, Cotswold and Merino bucks, fifteen varieties of pure-bred poultry. Prize-winners. No catalogue. Address with stamp, H. H. Hague & Son, Walton, Kas.

MAPLE GROVE HERD OF FANCY BRED POLAND-CHINA SWINE. Also Light Brahma fowls. Owned by Wm. Plummer & Co., Osage City, Kas. Stock of all ages for sale at reasonable rates.

D. TROTT, Abilene, Kas.—Pedigreed Poland-Chinas and Duroc-Jerseys. Also M. B. Turkeys, Light Brahma, Plymouth Rock, S. Wyandotte chickens and R. Pekin ducks. Eggs. Of the best. Cheap.

CATTLE AND SWINE.

FANCY Poland-China. J. H. Taylor, Pearl, Boars and Glits. Kas.

ASHLAND STOCK FARM HERD OF THOROUGHbred Poland-China hogs, Short-horn cattle and Plymouth Rock chickens. Boars in service, Admiral Chip No. 7919 and Abbotford No. 23551, full brother to second-prize yearling at World's Fair. Individual merit and gilt-edged pedigree my motto. Inspection of herd and correspondence solicited. M. C. Vansell, Muscotah, Atchison Co., Kas.

POULTRY.

PURE-BRED LANGSHAN AND BARRED PLYMOUTH ROCK EGGS, one dollar per thirteen. Address Robert Crow, Missouri Pacific Railway Agent, Pomona, Kas.

EGGS BY MAIL.—Are not allowed, but I will send eggs by express from Buff Leghorn, Buff Plymouth Rock or Silver Wyandottes at \$1.50 per setting. F. H. Larrabee, Hutchinson, Kas.

EGGS FOR HATCHING.—White Holland turkey, \$1.25 per 13; White Guinea and Plymouth Rock, 60c. per 13. Mark S. Salisbury, Independence, Mo.

FIRE BURNED MY HOME.—And all my grain January 24, so I will sell eggs from Knapp strain S. C. White Leghorns, \$1 per thirteen, \$2 per thirty. J. R. Cotton, Stark, Neosho Co., Kas.

A. B. DILLE & SONS, EDGERTON, KAS., breeders of choice B. F. Rocks, S. L. Wyandottes, Light Brahmas and M. B. turkeys. Chicken eggs \$1 to \$2 per 15; turkey eggs \$3 per 11. Satisfaction guaranteed.

EUREKA POULTRY YARDS.—L. E. Pixley, Emporia, Kas., breeder of Plymouth Rocks, S. Wyandottes, Buff Cochins, B. and White Leghorns, B. Langshans, M. B. Turkeys and Pekin ducks. Chicks at all times. Eggs in season.

EGGS, SIXTY-FIVE CENTS FOR THIRTEEN. Combination best strains Barred Plymouth Rocks, Black Langshans, Buff, White and Brown Leghorns. For sale, young stock from Wren's Poland-China pigs. Write for prices. No better stock in the West. Zachary Taylor, Marion, Kas.

"THE PROOF OF THE PUDDING IS IN THE EATING." The proof of good poultry is the show-room. At the State show, January 8-14, 1895, my birds took two first and three second premiums, and only six birds were shown. Eggs for hatching from as well-bred Barred Plymouth Rocks and Light Brahmas as are in the West, for only \$1 per thirteen. Stock for sale. Henry E. Peers, Marion, Kansas.

BRONZE TURKEY EGGS.—Average score of eighteen hens and toms 97½. Toms score 97½ and are from first premium stock at World's Fair. Eggs \$2 for 11. S. L. Wyandotte and S. C. B. Leghorn \$1.50 for 15. Mrs. F. W. Ives, Knob Noster, Mo.

17 Years Breeders of B. P. Rocks exclusively. Birds raised on four farms. We shipped 9,500 in 1893-94 into eighteen States and Canada. Eggs \$1 for 13; \$2 for 30; \$3 for 100. Eggs packed safe to ship any distance. Good hatch guaranteed. Send for circular. Joe Cunningham & Co., Loree, Miami Co., Ind.

E. E. AXLINE, OAK GROVE, MISSOURI, (Jackson Co.) Barred Plymouth Rocks. Bred from the best strains and judicious matings. Eggs \$1 per setting of fifteen. Satisfaction guaranteed.

EGGS! FROM 98 POINT BIRDS! SCORED BY JUDGE C. A. EMERY. 98 score 35 lb. young Bronze tom mated to 97½ point 20 lb. pullets. Eggs \$3 for 9. B. P. Rocks and L. E. Brahmas, score 92½ to 94½; eggs \$1.50 for 15. Cornish Indian Game, score 92½ to 93½; eggs \$2.50 per 15. Who can beat these prices, quality considered? I have a handsome lot of fall Poland-China males good enough to go anywhere. Write. Mention FARMER. GEO. W. NULL, Odessa, Lafayette Co., Mo.

SWINE.

SELECT HERD OF BERKSHIRES Have for sale pigs from State fair winners. Can all classes for show. Boars for fall service. A few choice sows bred. Address G. W. BERRY, Berryton, Shawnee Co., Kas.

S. McCULLOUGH, Ottawa, Kansas. Breeder of Pure-bred BERKSHIRE SWINE. Stock for sale at all times. Satisfaction guaranteed. Write for what you want.

BERKSHIRES. We offer choice selections from our grand herd, headed by a great imported boar. New blood for Kansas breeders. WM. B. SUTTON & SON, Russell, Kansas.

T. A. HUBBARD, Rome, Kansas. Breeder of POLAND-CHINAS and LARGE ENGLISH BERKSHIRES. Two hundred head. All ages. 25 boars and 45 sows ready for buyers.

THE WOOD DALE BERKSHIRES Champions of Two World's Fairs. New Orleans, 1885, best herd, largest hog any breed. At Columbian, Chicago, won ten out of eighteen first prizes, the other eight being bred at or by descendants of Wood Dale. New blood by an 1894 importation of 21 head from England. For catalogue Address N. H. GENTRY, SEDALIA, MO.

JAMES QUORLO, MOSCOW, MO. Breeder and shipper of prize-winning Large Berkshire Swine. S. C. Brown Leghorns and Bronze Turkeys. Headed by King Lee II. 29801, Mephistopheles 32412.

BOURBON COUNTY HERD, English & Berkshire & Swine. J. S. MAGERS, Prop., Arcadia, Kas. Imported and prize-winning American sows headed by Imp. Western Prince 32202. All selected and bred to head herds and to supply those wanting none but the best. Fall litters now can't be beat. Write or come visit me and see the herd.

J. W. BABBITT, HIAWATHA, KAS. BREEDER OF Regist'd Berkshire Swine 45 in herd, headed by Lord Majestic 34738, a son of Imp. Lord Windsor 30461; dam Imp. Majestic 30459. 6 boars, 12 glits, by Model Duke II. 22467, and 9 fall of 1894 farrows, both sexes, for sale. Write or come.

BERT WISE, breeder of Poland-China Hogs, Holstein Cattle and Barred Plymouth Rock Chickens of choicest strains. Butler's Darkness No. 6846 S and Ideal U. S. Nemo at head of swine herd. Only choice stock shipped on order. Sows bred and a few extra good young boars for sale. Three are out of my Orient sows. Write your wants. Satisfaction guaranteed. BERT WISE, Reserve, Brown Co., Kas.

GEORGE TOPPING, Cedar Point, Kas. (CHASE CO.) Importer, breeder and shipper of LARGE ENGLISH BERKSHIRE SWINE of best families and breeding. Choice pigs for sale at low prices. Also Single-combed Brown Leghorns and Mammoth Bronze turkeys. Eggs in season. Farm 6 miles south of Cedar Point. Mention K. F.

JOHN A. DOWELL'S HERD REGISTERED POLAND-CHINA SWINE. Robinson, Brown Co., Kas. 130 head, all ages, headed by Onward 8081 S, sired by George Wilkes. He is assisted by Tecumseh Wilkes, sired by General Wilkes 21927. The females belong to the best strains. Come or write.

JOHN KEMP, North Topeka, Kas. breeder of improved Chester White Swine. Some fine young boars fit for service for sale. Correspondence invited.

STANDARD POLAND-CHINA HERD. CHAS. A. CANNON, Proprietor, HARRISONVILLE, CASS COUNTY, MISSOURI. Breeder and shipper of registered Poland-China swine of the best strains. Herd headed by Chow Chow 5933 S, assisted by a Black U. S. son of Imitation 27185 O, also a son of Tecumseh Jr. 10207 O. 220 head in herd. Young boars and glits yet on farm. Write or come and visit me.

BARRED PLYMOUTH ROCKS EXCLUSIVELY. All high-scoring birds. Have bred Plymouth Rocks for thirteen years. Yard headed by cockerels scoring from 92½ to 94 points, including a cock sired by the World's Fair winner, scoring 94 points by Pierce, and a 93½ point cock from L. K. Felch's yards. Have shipped eggs to all parts of the United States. Eggs \$1 per thirteen or \$2 for thirty. I guarantee satisfaction. Send for circular. D. B. CHERRY, Knoxville, Marion Co., Iowa.

CATTLE.

SUNNY SLOPE FARM, C. S. CROSS, Proprietor, Emporia, Kas.

Breeder of PURE-BRED HEREFORD CATTLE. Herd headed by Wild Tom 51592, a son of Bean Real 11055 and assisted by sons of Cherry Boy 26475, Archibald 1st 39258 and Washington 22615. 200 head, all ages, in herd. Strong in the blood of Lord Wilton, Anxiety and Horace. A choice lot of young heifers, fit for any company. Bulls all sold. Correspondence solicited, or, better still, a personal inspection invited.

SHANNON HILL STOCK FARM, G. W. GLICK, ATCHISON, KAS.

Breeds and has for sale Bates and Bates-topped SHORT-HORNS. Waterloo, Kirklevington, Filbert, Cragg, Princess, Gwynne, Lady Jane and other fashionable families. The grand Bates bull Waterloo Duke of Shannon Hill No. 89879 and Winsome Duke 11th 115,137 at head of herd. Choice young bulls for sale now. Visitors welcome. Address W. L. CHAFFEE, Manager.

MAKIN BROS. Hereford Cattle. Breeder of Choice stock for sale of both sexes. We will sell any individual, a carload or the whole herd at reasonable prices. Write or come and see us. Address Florence, Marion Co., Kansas.

SWINE.

J. R. KILLOUGH & SONS, Richmond, Franklin Co., Kansas. POLAND-CHINA SWINE. Headed by Upright Wilkes 13246 and assisted by J. H. Sanders Jr. 13739. Our brood sows are all richly bred and high-class individuals. A fine lot of fall pigs, both sexes, ready to go at reasonable prices.

A. E. STALEY, Ottawa, Kansas. CHESTER WHITES AND POLAND-CHINAS. Light Brahma eggs \$1.50 for 15.

BLACK U. S. AND WILKES 300 head, registered or eligible. Boars in service, Modest Duke 12653 S, Wilkes Tecumseh 11760 A, White Face 12081 O, and Osgood Dandy Wilkes 12709 S. 60 young boars; 80 glits. J. R. CAMPBELL & SON, Avilla, Jasper Co., Mo.

W. S. ATTEBURY, Rossville, Kansas. BREEDER OF Chester Whites Exclusively. Young stock at all times. Satisfaction guaranteed.

HOLSTEIN-FRIESIANS Careme 2d's Jacob Prince of Twist 404 heads herd, backed with butter record of over 35 lbs. in 7 days. Young bulls for sale. Red pigs in pairs, heavy bone, good color, dams often farrowing 14 pigs. Males Duroc Jersey Reds ready for service. Poland-China males ready for use. Pigs of all ages in pairs not related. Young glits, either bred, bred if desired. Pigs shipped at my risk. Pedigrees furnished. M. H. ALBERTY, Cherokee, Crawford Co., Kas. Mention FARMER, AND POLAND-CHINAS.

(Breeder's Directory continued on page 16.)

FARMERS!
Prevent Your Hogs From Rooting
By Using the Genuine



WOLVERINE
HOG RINGER and RINGS.
Best and Cheapest in the market. For sale at Hardware and General Stores. Made by Heesen Bros. & Co., Tecumseh, Mich.

The Stock Interest.

THOROUGHbred STOCK SALES.

Dates claimed only for sales which are advertised or are to be advertised in this paper.

SEPTEMBER 6—Walter Latimer, Garnett, Kas., Poland-China swine.
OCTOBER 4—Winterscheidt Bros., Horton, Kas., Poland-China swine.
OCTOBER 9—Geo. W. Null, Odessa, Mo., Poland-China swine.
OCTOBER 22—F. M. Lall, Marshall, Mo., Poland-China swine.
OCTOBER 23—C. G. Sparks, Mt. Leonard, Mo., and G. L. Davis, Elmwood, Mo., Poland-China swine.
OCTOBER 30—L. N. Kennedy, Nevada, Mo., Poland-China swine.

Polled Durhams.

EDITOR KANSAS FARMER:—I will try to answer Mr. Gehman's letter, in your paper, about the Polled Durham cattle. Like Wilkie Blair, of Beulah, I wanted the hornless cattle, as I think it cruel to cut the horns off, or use caustic potash or any of the dehorning fluids.

I saw in the papers that Jno. H. Miller, of Mexico, Ind., exhibited his Polled Durhams at the World's Fair and took thirty-five premiums, and when I visited the fair I also visited over in Miami county, where Mr. Miller lives and keeps his cattle. I looked at the cattle several times before I could make up my mind to pay his price, but I bought a pair and each day I am better satisfied with my bargain.

My bull took first premium at the World's Fair as a yearling. I bought him the day he was two years old, when he weighed 1,750 pounds. The cow took second premium as a yearling. She dropped a bull calf a year ago to-day, which was sold at five months old, at which time he weighed 400 pounds, with no extra care.

The cattle are a deep red, low down, blocky, admirably built, as near Short-horn as can be. They have to be 87½ per cent. Short-horn before they can be registered in the "Polled Book," and must be hornless. My cow is eligible to registry in the Short-horn Herd Book, but the bull is not, having too much of the "muley cow." The breed of Polled Durhams has been in existence about seventeen years. All calves of registered Short-horn cows bred to Polled bulls are eligible to registry in the Polled Herd Book, providing they are hornless. I think there are no cattle so good for all purposes as the Short-horns, but they have the one disadvantage—horns; so I have the Short-horns less the horns.

I live seven miles northwest of Wichita, where I will be glad to show my cattle and tell of their merits.

Wichita, Kas. J. Q. HOWES.

Holsteins.

EDITOR KANSAS FARMER:—In your number of April 24, I notice the comment of Wilkie Blair on Red Polled cattle. The writer says, "I am prejudiced." I should think so, after reading the article—too much so. It would be well to have some more experience. As for the Holstein cattle, I cannot approve his statement. I have, at present, a dozen of them—pure-breds and grades—but not one that I have to milk with thumb and index finger, while some, the boys think, have rather large teats. As for the horns, I think the Almighty gave them to the Holsteins for an ornament—at least that is all they use them for. I have no use for a dehorner.

As for steers, I can get as much for them as any other kind. I sold five yearling calves last fall for \$100, and I sold fat steers for as much as others. I know they say they are not as good, but when bought then they are the best. The best of it is, the Holsteins are all good, while some are excellent, while with other breeds you get one in many. As for the color, Mr. Blair may like the red. As for me, there are certainly none finer than the black and white cattle.

I am a Swiss. The most noted country for fine cattle is Switzerland, and I have been with them ever since I could drink milk, and have handled many different breeds, unfortunately not the Red Polled, but I find enough extra in the Holstein to convince me that I want no others. I therefore

send these few lines to the KANSAS FARMER to the credit of the noble Holstein. JNO. WITSCHY.
Fairview, Brown Co., April 30.

Herd Notes.

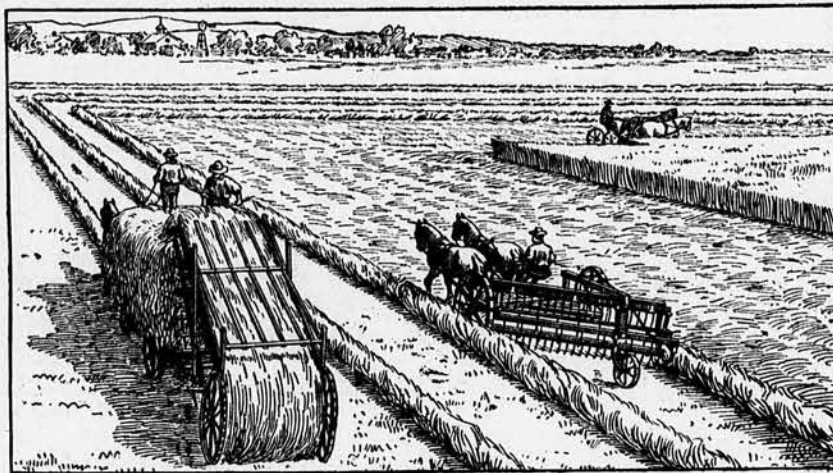
J. S. Magers, proprietor of the Bouffon County Herd of English Berkshires, reports his spring pig crop coming along first-rate. Last week two gilts and a young boar went to Missouri and a high-class young chap was shipped to Arkansas. The inquiries and sales are fairly good for this season of the year and there are yet a few good ones that are ready for the buyer.

A visit was made last week at the Wood Dale farm, owned by the well-known Berkshire breeder, N. H. Gentry, of Sedalia, Mo., also breeder of registered Short-horn cattle, horses, jack stock and sheep. The herds are in splendid condition now and are being depleted at fair prices. One yearling sow went a few days since to Connecticut for \$300, and two more to Texas at \$150 each. The buyer of the \$300 animal is coming shortly to the farm with a view of considering whether or not he will pay the price asked for another young sow, viz., \$500. All the Short-horn bulls old enough for service are gone except two that will be ready for service early this coming summer.

W. S. Attebury, breeder of Improved Chester Whites, at Rossville, Shawnee county, Kansas, reports the herd in excellent condition. The intending buyer will find over sixty youngsters that will be ready to go in a few weeks. Several of fall farrows are ready now. The youngsters belonging to the March and April farrowings were sired by two prize-winning boars, Free Silver 6861 and Kaw Valley Pride 6801. The latter boar won first prize at the Kansas State fair in 1893. Free Silver was bred by Silvers, of Ohio, and is right up in his conformation points, equal to any man's hog of any breed or color. Among the sows that have litters to the

he by Geo. Wilkes 14487; dam Corwin Tecumseh 68680 by Grand Tecumseh 19948 and out of Lady Corwin 63924. Space forbids that extended description that they both merit. The females belong mainly to the Black Bess, Corwin and a large draft of Wilkes. The spring litters are a fine, smooth, thrifty lot of youngsters and show up in great credit in favor of their respective sires. Mrs. Axline is having a good trade in sending out eggs from her pens of select Barred Plymouth Rock chickens. Her price is consistent with the times, \$1 per setting of fifteen. The birds are all vigorous and healthy and no breeder of fowls is more deserving of success than is Mrs. Axline.

Among others reporting a successful spring pig crop, is Martin Meisenheimer, one of Brown county's successful Poland-China breeders. He states that he can safely declare that the youngsters now at home on the farm are the best lot farrowed since the herd was founded, some years ago. The sons and daughters of Tecumseh Free Trade are all good ones—broad-backed, deep, wide and with legs on the corners. The writer appreciates the foregoing statement and will, we believe, be joined with nine out of ten that have looked over the sire and the individuality of the female make-up of the herd. Credits to other sires are also among the little ones. Lady Corwin, a fine litter by T. F. T.; also Lady Gold Coin and Edward's Lassie. Lady Free Trade one by L's Tecumseh, that was bred by Messrs. Colthar & Leonard, of Nebraska. Lady Short Stop 2d has a competing litter, as well as Lady Free Trade 2d. The latter litter are just a little more than good ones, and, as the professional is wont to say, "They'll be heard from later on." Among the best retained in the herd out of last year's breeding are two females, Lady Tecumseh and Lady Short Stop, both of which have fine litters by Butler's Darkness 6848 S. Another litter by Victor M. Jr. and out of Lady Sparks are coming and



HAY LOADER AND SIDE-DELIVERY HAY RAKE, MANUFACTURED BY THE KEYSTONE MFG. CO., STERLING, ILL.

credit of the aforementioned sires are Daisy 6910, Grace 8284, Belle 8276, Pearl 8278, May 6912. The five white mothers are raising forty-four broad-backed, deep-hampered piglets. Prices will be made to suit the times, says Mr. Attebury.

James Mains, the veteran breeder of twenty-five years, twenty-one of which have been Poland-Chinas, reports the best pig crop ever bred on the farm. The writer, about three weeks since, paid the farm a field visit and was much pleased with the outlook and the twelve litters then on the ground. The major portion of the youngsters were sired by the highly-bred harem kings, Monroe's Model U. S. 20933, McWilkes (Vol. 17), that won first premium at the Nebraska State fair in 1894, and the very excellent aged boar, Excell 31731. The twenty-five aged brooders and gilts bred belong to the best Poland-China families and the writer feels sure that the visitor will agree in saying that no better pigs, for both individuality and breeding, can be found anywhere, not even in Ohio, where Mr. Mains got his recruits principally. He makes it a rule to send out only the best and guarantees complete satisfaction in every instance. A few orders yet could be filled for fall and winter pigs of both sexes. Mrs. Mains, the visitor will find, is quite successful in breeding Plymouth Rock and Buff Cochins chickens and takes pleasure in shipping her friends eggs from birds of the best strains and judicious matings at reasonable prices.

E. E. Axline, of Oak Grove, Jackson county, Missouri, was visited by the writer last week, and we were much gratified to find the herd of Poland-Chinas and pens of Plymouth Rock chickens doing finely. The twenty aged brooders are headed by Roy U. S. 13843 S. and 24165 A. He is by Roy Wilkes 23505 A., a grandson of Black U. S. 18345 A., and out of Hill's Darkness 2d 65768 A. He is doubtless one of the best bred and well-balanced individuals in the West. He is assisted by Western Wilkes 12846 S., bred by Cantrell & Garrett, of Illinois, sired by Guy Wilkes 2d 17777,

promising nicely. Lady Corwin 2d is in expectancy to U. S. Nemo. The reader will see, especially if he be well up in Poland-China lore, that the Meisenheimer herd has great strength and well diversified. Tecumseh Free Trade, Butler's Darkness, Victor M. Jr., U. S. Nemo, T. F. T. and L's Tecumseh blood makes a grand good aggregation and no one is more entitled to merit its worth and profit than is its owner, Mr. Meisenheimer.

Mr. Bert Wise, of Reserve, Brown county, one of the foremost breeders in Kansas, reports that for the past six weeks his time has been almost exclusively taken up in looking after the Poland-China spring pig crop, that, at the date of writing, aggregated 115 youngsters. A majority of them were sired by the noted six-year-old breeding boar, Butler's Darkness 6848 S. Several good, strong litters are by a son of the \$275 sow, Lizer's Nemo 24471 S., that was sired by the noted A. A. 2d. This young fellow weighed 120 pounds when just 120 days old, and is developing in excellent form and promises to be a great sire, weighing between 700 and 800 pounds. Among the prize-winning females that have lately farrowed is the young sow, Bessie Free Trade, bred by Cantrell & Garrett, sired by the \$800 Free Trade and out of Bessie Wilkes by the \$950 Guy Wilkes 2d. Her litter of six are by that noted sire, the \$300 Haines Black U. S. If breeding counts for anything, and the six youngsters, four sons and two daughters, come along right, as they doubtless will, there'll be something worth attending Mr. Wise's coming fall sale for. Mona Adams 26509 S., that won first in class and sweepstakes in a ring of drafts from eleven herds last fall, is raising a fine litter of six by Butler's Darkness. Many Kansas and Nebraska breeders will also call to mind the excellent individual—as Mr. Wise calls her, "My old sow"—Mollie's Black Ohiope 17901 S. She has six grand ones to the credit of the six-year-old sire. Close up comes Wise's Susa, with seven of her eleven by the same sire. Among the re-enforcements that came to the farm during the past

The Only One To Stand the Test.

Rev. William Copp, whose father was a physician for over fifty years, in New Jersey, and who himself spent many years preparing for the practice of medicine, but subsequently entered the ministry of the M. E. Church, writes: "I am glad to testify that I have had analyzed all the sarsaparilla preparations known in the trade, but



AYER'S

is the only one of them that I could recommend as a blood-purifier. I have given away hundreds of bottles of it, as I consider it the safest as well as the best to be had."—WM. COPP, Pastor M. E. Church, Jackson, Minn.

AYER'S
THE ONLY WORLD'S FAIR
Sarsaparilla
When in doubt, ask for Ayer's Pills

twelve months is Lady U. S. Butler, that her present owner paid \$150 for at the T. J. Beresford sale. She is raising four fine little ones, sired by Ideal U. S. Nemo, the assistant aforementioned. The two leading Orient harem queens have each litters of six by the master of the harem. Space forbids more extended notes at this time, unless it be to state that the healthfulness of the herd was never better—in fact, cholera has not as yet made its appearance on the farm since the herd was established, several years ago.

Ayer's Pills are recommended by leading physicians and druggists, as the most prompt and efficient remedy for biliousness, nausea, costiveness, indigestion, sluggishness of the liver, jaundice and sick headache; also, to relieve colds, fevers, neuralgia and rheumatism.

"Among the Ozarks,"

the Land of Big Red Apples, is an attractive and interesting book, handsomely illustrated with views of south Missouri scenery including the famous Olden fruit farm of 3,000 acres in Howell county. It pertains to fruit-raising in that great fruit belt of America, the southern slope of the Ozarks and will prove of great value, not only to fruit-growers, but to every farmer and home-seeker looking for a farm and a home. Mailed free. Address, J. E. LOCKWOOD, Kansas City, Mo.

New Dining Car Service.

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Agricultural Matters.

Subsoiling Saves the Surplus Water.

EDITOR KANSAS FARMER:—One of your readers writes me to let the FARMER know how the subsoiled land worked during the recent heavy rain and if it was not a quagmire. We had a rainfall of about six inches and I had four acres that was subsoiled twenty-four inches deep, every twelve inches. When I subsoiled in the fall, the soil just over the hard-pan and just under the good surface soil was as dry and hard as a whetstone, and this condition is the reason the plow raised up the ground for two feet each side, as it did not work this way in the same ground this spring. When I read Mr. Peckham's very instructive letter, in which he said the sub-moisture and surface moisture had met, I immediately went out and examined my soil, and although we had not had a drop of rain, yet this hard and dry under soil was completely wet through, either from capillary attraction or absorption from the air when the temperature was below 45°. The action of the moisture had mellowed this hard dirt all up, and although we had no rain and the snow blew off of this piece, yet when we plowed it this spring it was as moist as any ground on the farm. I hired a man and team who ran a twelve-inch plow four inches deep and with three horses I ran the "Perine redeemer" eighteen inches in bottom of furrow, which made the broken soil measure twenty-two inches.

I never in my life saw plowing before. I thought I knew something about it, but now see where I have been blind. I have used a seventeen-inch plow and cut about twenty-two inches with it, and although the plow covered trash well, I now see the difference between twelve and twenty-two-inch cut. The plow ground up the soil into small particles and the "redeemer" swelled the furrow full of loose, mellow, moist soil, raising up the whole furrow, but not for two feet, as in the fall. Not a drop of the six inches of rainfall got off of this piece, and after the sun came out the surface was dry before the water had settled in the dead furrows on fall plowing, and instead of horses slumping in, it was the firmest ground I had, as the water had settled it. All my other plowing ran the water off and did not absorb over one-half of it.

I had three-fourths of an acre intended for melons, that was just below my sheep sheds, and I had sub-broke this for twenty-four inches, and I went out in the storm and ditched the wash from an acre of hog corral, one-half acre sheep corral, one-fourth acre cow corral and the wash from the doorway and sheds and stable onto this patch, and the red water filled it full, until it stood in the dead furrows, but none got off. I not only caught the six inches that fell but ran in six inches from a larger territory and saved it all. It had formerly run off into the creek. This liquid manure was equal to a heavy dressing of fertilizer, and no more wash from the yards will ever cross my fields again, as the tracks made by the "redeemer" will catch it all.

Brother farmers, just think of it. We have the best county on earth and a loving Father gives us plenty of rainfall if we only will take care of it. He always gives us a dry spell in July and August, on purpose to allow us a chance to secure our hay crop, and if we have stored up the spring rain we shall not suffer.

I have never seen the future look so bright to a farmer as now, to one who has subsoiled his land and done his part.

Supposing the whole of eastern Kansas should be subsoiled and hold all the rain that falls, what would be the result? To those who have ordered a subsoil plow and have not received one as promptly as desired, I have this to say: Consider yourselves of the very fortunate ones who are so fortunate as to have a prospect of a plow, as thousands will not get them for years and you will be on the top of the pile. Put in your corn and when it is six inches high, use three horses and go once be-

tween the rows, about sixteen inches, and you will catch all of the June flood that we are sure to have, and your corn will weather through July and August all right.

I have cultivated in my oats in corn stalks and went once between the rows with the "redeemer," and I don't think any water will get off, and confidently expect the oats to be benefited by it, and if other oats are blighted or rusted, I think mine will not be. I left a strip not treated to use as a test and will report.

C. J. NORTON.

Morantown, Kas.

"Conservative."

EDITOR KANSAS FARMER:—It may be instructive to many readers (I know it is to me) to read the many articles on the subject of "conservation of moisture" and its kindred subjects, but to the actual farmer, the one who plows, sows, plants and reaps, the practical utility of those articles fall on barren soil. Some few may experiment and try to follow their delusive plans and in the end go broke, while many conclude that the writers have "an axe to grind," and consequently pay no attention to them. Farmers, as a class, are easily duped, else there would be fewer "lightning-rod men" and other soft snaps afloat.

Now, I may be called a crank on the "conservation of water," etc., but I know from experience that it is easier to write those articles in a splendidly-furnished office in some city, than it is to build dams, reservoirs, etc., or to

"Drove a Stake and Worked Around It."

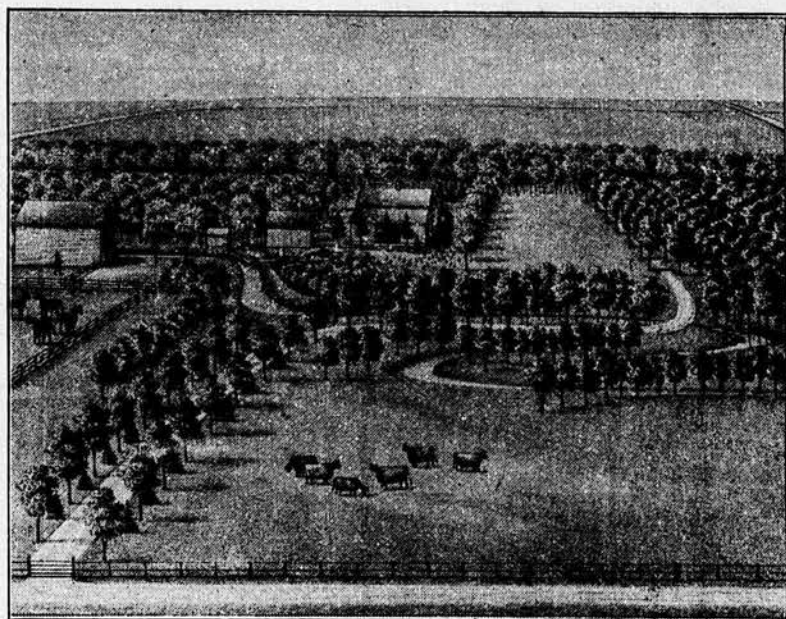
The KANSAS FARMER cannot spare the space to print one in a hundred of the commendatory letters it receives. The following, however, shows so plainly the reason of the writer's success and the photograph brings out so well the simple taste and home characteristics of the farm he has made, and is withal so strong a testimonial to the worth of the agricultural press, that we have had the picture engraved and here give the letter as an encouragement to thrift and an incentive to hope and a prophesy of prosperity to those who, like him, "drive a stake and work around it," not neglecting to read the agricultural papers, and especially the "old reliable" KANSAS FARMER:

SUTPHEN'S MILL, KAS., March 20, 1895.

EDITOR KANSAS FARMER:—Find inclosed dollar bill to renew my subscription for the "Old Reliable" KANSAS FARMER. I want you to understand, Mr. Editor, that I don't want you to ask me any more that question—"Whether I want to renew my subscription or not." I cannot do without the KANSAS FARMER. I am going to have it, as I stated in my other letter, and that you should send it right along. I am here to stay. I can't keep house without it.

I inclose a picture of my residence, so you can see what I have done in twenty years, by driving my stake deep and working right around it. I started a poor man. Came to Kansas with my family with only a nickel in my pocket. I had my land paid for. So you can see what a man can do.

I have always taken an agricultural paper of some kind. I know that the knowledge I have gained from reading the KANSAS FARMER has been worth hundreds of dol-



RESIDENCE OF A. E. BOYLAND, SUTPHEN'S MILL, DICKINSON CO., KANSAS.

subsoil with a Perine or any other plow. In other words, theorizing is very easy, and with a well-sharpened Faber and a tablet in two hours time a man can become a millionaire in the sheep business, but practical results in the sheep business are about as near the millionaire mark as the same results in irrigation and "conservation of moisture."

Several years ago the writer attempted to utilize the surface water that should flow through a draw, by building a dam, intending to use the superfluous water for irrigation purposes. That dam is still in existence, the semblance of a reservoir or pond is there, but at no time in the five years of its existence has the pond been full of water, and further, when it is necessary to apply water artificially the pond is absolutely dry. Others in this county have had like experience.

Now, where is the practical utility of subsoiling when we do not have sufficient rainfall to wet the subsoil? At this writing our subsoil is absolutely dry.

Irrigation, I believe, is all right, but let us have a rest on the subject of "conservation of moisture." S.

Barber Co., Kas., April 29, 1895.

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lars to me. I would advise every man, young or old, to take an agricultural paper.

I may send some more pointers in the future.

Yours respectfully,

A. E. BOYLAND.

Flax for the Fiber.

EDITOR KANSAS FARMER:—In a former communication I outlined somewhat the cost of utilizing the product of our flax straw. I will now discuss the subject of flax-raising as an agricultural product of Kansas. First, does it pay to raise it as it is now raised, only for the seed? Second, what is the probability that it will continue to be so in the future?

In my experience of over twenty years in flax-raising, I have found the result to stand about this: In the twenty odd years I find the average of the seed obtained per acre to be between eight and a half and nine bushels. The price of the seed on an average has been 78¢ cents per bushel. That is the cash result of the crop in dollars and cents, as it now stands. Still, we have this thing in favor of flax-raising, that we need it as a crop to diversify the industry of our farmers. Then, it occupies the ground but a short time, and as it is less liable to be damaged by insects than any other crop, and is a hardy crop, and if it don't make seed it always makes a crop of straw. Then we can use it as a kind of side issue, because it takes up very little of our time in putting it in the ground and harvesting. It is generally supposed that the flax plant is very depleting to the soil, but it is not

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so much worse than other crops as long as we cut and do not pull up by the roots. Now, as to its continuance as an agricultural crop in its present condition—will it continue to be raised for seed only?

A slight review of the past would shed some light in answering the question. In the early history of this country, the colonies raised flax, both for fiber and seed, and it was aided by government bounties and every method of fostering the raising of it was adopted. It seemed to be an essential element in providing the clothing of the people, and yet with all that it has ceased to be raised in the New England States. As the population went westward, flax-raising went with it. New York and Ohio and Indiana continued to raise flax partially for seed and partially for what use they could make of it. The manufacture of linen fabrics in this country has languished in consequence of the small supply and high price of the raw material and has fallen into the hands almost entirely of foreigners and the raw material is brought from Europe. We are still continuing to raise it in the Western States for the seed only. Now, if our ingenuity and enterprise cannot formulate some method of utilizing the most valuable part of the plant, how long will we continue to raise it, or will we, like Eastern States, give it up altogether? We import annually great quantities of linen fiber, in its different varieties, also a large quantity of seed for our oil mills from Calcutta and the far east. The product of our spindles is made from supplies of fiber from Europe, costing \$200 to \$600 per ton. It seems to me that the utilization and making it to supply our own mills is a pride worth striving for. It interests not only the farmers but the enterprise will be vastly beneficial to the laboring interests of our country.

Fort Scott, Kas. H. B. WARE.

Sorghum for Forage.

EDITOR KANSAS FARMER:—As the season starts out with the prospects good for a shortage in the forage crops, I thought if I would give some of my experiments with cane last season it might help some one who might be short on feed.

I took the wheat off of a piece of ground just as soon as it would do to stack and listed in cane. I harrowed it three times and cultivated it twice, and when the first frost came about half of it was in bloom. It made fine feed. I made a mistake in planting a late variety instead of an early one, or it would have made a half crop of seed, at least, which would have made it much richer, as the sugar does not begin to form much until the seed does. The better way is to plant now and cultivate same as drilled corn. The seed will all have time to get ripe, and in consequence make the best of feed.

W. D. GARD.

Thayer, Kas.

As the strength of a building depends upon the solidity of its foundation, so health depends upon the condition of the blood. To expel impurities and cause the vital fluid to become vigorous and life-giving, Ayer's Sarsaparilla is the most powerful and effective medicine in use.

A new dining car service between Chicago and Buffalo via the Nickel Plate Road, has recently been placed at the disposal of the traveling public, which will enable patrons of this favorite low-rate line to obtain all meals on trains when traveling on through trains between Chicago, New York and Boston. For reservations of sleeping car space and further information, see your local ticket agent or address J. Y. Calahan, General Agent, Chicago.

Irrigation.

THE SUB-SURFACE WATERS OF THE GREAT PLAINS.

Read before the Philosophical Society, of Topeka, April 24, 1895, by E. B. Cowgill, Editor of the KANSAS FARMER.

It was several years ago determined by Laws and Gilbert, the noted English experimenters, that the quantity of water transpired by a crop of wheat or grass during the season of its production, from seed to maturity, is about equal to seven inches spread uniformly over the entire surface on which the crop is produced. More recent investigations have confirmed the substantial correctness of this determination. The question, therefore, of the sufficiency of the rainfall of any region of country, for the purposes of agriculture, depends, not so much on its absolute amount, as upon the prevention of waste, and the utilization of the moisture in the production of crops. There is scarcely a place in the Great Plains region of the United States—a region 400 to 450 miles wide by, perhaps, 1,200 miles long, extending from the base of the Rocky mountains eastward, and having for its length the almost entire breadth of the nation—in which as much as seven inches of water does not fall during even the driest year. What becomes of this water is an important question. Whether its waste and loss can be prevented is even more important. What proportion of it can be recovered and returned to the soil is another branch of the subject which is just now receiving great attention. This Society heard, recently, from the Hon. H. R. Hilton, an able discussion of "Soil Characteristics and the Department of Moisture in Soils," with valuable hints as to its preservation from waste. That branch of the subject is just now receiving very marked attention from the Soil Division of the United States Department of Agriculture, and in this State the investigation has been placed, very wisely, in charge of Mr. Hilton. Sufficient has already been determined to make it certain that of the rain which descends upon our farms, very much more can be conserved and made available for plant growth than has heretofore been supposed. In this work the subsoil plow, the surface cultivator and the scratching harrow are known already as efficient implements, and the increasing use of these, together with the determination of times and seasons when they are most advantageously employed, is designed to play no small part in the future prosperity of our agriculture.

Another branch of the subject, that of the recovery of run-off water and its distribution upon the surface, is receiving attention as never before. Very appropriately this branch of the subject is being investigated, and the resources of the arid and semi-arid regions of the United States are being increased, practically, by irrigation. It is needless here to discuss which is the more important, to hold the water in the soil until plants shall have appropriated it, or to recover the run-off water and re-apply it to the soil. The wise husbandman will avail himself of his opportunities in both directions to the largest extent practicable. But we have to do, to-night, with the recovery and re-application of run-off water. How much of it is there available on the plains? What are the means of obtaining this water, and how great is the amount of it? For what proportion of the plains is this run-off water available? Questions as to this branch of the subject come rapidly forward for answer, and are engaging the attention of both theorists and practical men as they never before claimed the attention of the Anglo-Saxon race.

The quantity of water required for the irrigation of land is very great. The number of times which it must be applied depends very much upon the crop, and upon the amount and distribution of the rainfall of the locality under consideration. If crops are to depend entirely upon water artificially applied, not only the seven inches required to be transpired by the crop in its growth, but also a large amount for waste must be applied. It

is generally estimated that the entire amount of water required for both crop and waste will amount to twenty-four inches per annum. This is easily figured, as seven inches for the crop and seventeen inches for waste. But in the Great Plains region of the United States there is probably no considerable area on which, even in the driest year, there is less than ten inches of rainfall. If this be reasonably conserved in the soil, it leaves, for the production of the average crop, wanting but fourteen inches to be artificially applied. Over a large part of the semi-arid region the average rainfall is fifteen to twenty inches, leaving a deficiency of four to nine inches for ordinary crops. For gardening and other intense forms of agriculture, larger supplies are necessary, and inasmuch as farming by irrigation tends to intensity of cultivation and increase of the crop yields, not unlikely the irrigated areas will continue to apply, as they do now apply, more than the difference between twenty-four inches and the average precipitation. At Greeley, Colo., where the average precipitation is thirteen to fifteen inches, under the high cultivation of that community, about thirteen inches is artificially distributed upon the cultivated land. Since one acre inch of water weighs about 112½ tons, it is evident that no small supply will suffice for the irrigation of any considerable area.

Is sufficient water available for irrigating much of the Great Plains? It is known that under very large areas of the plains region there exists what is termed underflow or sheet water. In many places this is available in very large quantity. Indeed, it is considered, by farmers and others who have had occasion to draw upon it, to be practically inexhaustible. Ask where this water comes from, and perhaps the majority of the dwellers on the plains would say that it is from the Rocky mountains, and is indefinite in quantity. Undoubtedly the water precipitated on portions of the eastern slope and the Rockies finds its way down the valleys of the great streams which lead from the mountains out across the plains, and since the beds of these streams are usually composed of coarse sands and gravels, sometimes hundreds of feet in depth, and extending out under the country to various distances, more or less water is conveyed from the mountains into the underflow. But on this point we need not dispute with the geologists and other men of science who consider that the plains water, to but an inconsiderable extent, comes from the mountains. The Great Plains extend up to the base of the mountains, and slope off gradually towards the east. The upper strata of much of this plains country is readily permeable by water. The surface itself often becomes dry and compact to such an extent that water does not readily permeate it until it has fallen upon it for a considerable time, and the rains, which are usually torrential, run off over the surface, to the lower arroyos, which, for the time being, become turbulent streams. Very often, however, the water in these sinks away before reaching any permanent stream, and between this seepage and evaporation disappears from the surface. That which thus comes into the underflow sometimes reappears as springs, but in many cases becomes a part of the permanent underflow or sheet water which is able to but slowly make its way toward the sea. The rate of its progress is so slow that it is scarcely determinable, so that it becomes much like an underground lake, filled with sand and gravel. In times of unusual freshet some of the water runs over the surface into the larger drainage courses and flows rapidly out of the country. For the first 300 miles east from the Rocky mountains, in the latitude of Kansas and Nebraska, the mean annual rainfall is not far from fifteen inches. What proportion of this is lost by evaporation, and what proportion comes into the underflow has never been determined with sufficient precision to satisfy even the least exacting. Prof. Robt. Hay, of Kansas, quotes Prof. Van Diest in his estimate that for eastern Colorado probably five

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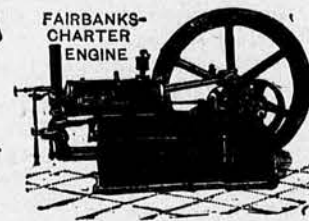
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inches of the rainfall is recoverable from under ground, and Prof. Hay gives it as his opinion that this estimate is approximately correct, and will apply to adjoining parts of Nebraska, Kansas and Texas. If this may be assumed as correct, and it is probably about a mean of the various estimates—some placing it as low as two inches and others much above five—it furnishes a basis for calculations as to the amount of land on which water may be redistributed by artificial irrigation. If it be assumed that, to the annual rainfall, an addition of as much as twenty inches is necessary for the production of maximum crops under intense cultivation, it is evident that this recoverable water will be sufficient to irrigate one-fourth of the entire area. If less intense cultivation prevail, so that not more than ten inches need to be added to the precipitation, then water enough is recoverable to irrigate half the entire area. Considerations like this led the writer some time ago to estimate that, for the western half of Kansas, a region which extends much farther east than the regions considered by Professors Van Diest and Hay in their estimates, water enough will be found to irrigate 50 per cent. of the entire area. It has been objected to this that no irrigated country in the world waters so large a proportion of its land. The writer disavows all responsibility for this state of facts, but is impelled to believe that the region under consideration is favorably situated to become the greatest irrigated country in the world. Its topography, its soil and its sunshine are as nearly perfect as can be conceived.

Wells sunk into this great underground reservoir indicate that it extends under a very large proportion of the plains region. Certainly there is comparatively little of the western half of Kansas or southern Nebraska under which it has not been found at varying depths. It is prevented from sinking away to the ocean level by the impervious strata below it. It is prevented from running rapidly down the plains to the ocean by the obstruction of sand and gravel in which it is stored. It is safe from evaporation by its covering of soil. It is replenished annually by the run-off from the region itself, with doubtless small addition from the mountains west of it. Its depth below the surface varies from three to four feet, in the first bottom of the streams, to ten or twelve feet in the large areas covered by the second bottoms, to thirty or forty feet on the lower uplands, and to 100 to 250 feet in the higher uplands. It is not infrequently separated into upper and lower measures by intervening layers of clay, sometimes but a few inches thick and sometimes several feet. Its depth has been found variable in the borings which have been made in sinking salt wells and in other deep borings. At Sterling, 150 feet was found before the impervious red rock was encountered. At Garden City, much greater depth

was found. In the uplands it is sometimes not encountered at all. At other places, to a depth of a few inches, and at still others, several feet. Usually the lower water-bearing strata afford the stronger supply, and in the coarser sand, and are found the more desirable to draw from.

Very few comprehensive experiments have been conducted to ascertain what amount of water can be obtained at a given point. The difficulty of sinking open wells into the sandy and gravelly water-bearing strata is considerable. Tubular or "drive" wells are much more common, and some experiments with these have greatly surprised observers as to the amount of water available in a given time. At an experiment recently made by G. N. and E. R. Moses, near Great Bend, a six-inch tubular well was sunk to a depth of about twenty feet into the water-bearing sands. The perforations in this tube were for a length of eight feet, and were covered with No. 60 wire gauze. The pump was run all day, throwing 500 gallons of water per minute, and afterwards the amount was increased to 600 gallons per minute, and continued for three hours without lowering the water in a tube sunk beside the perforated point. Numerous other experiments have tended to show that, so far as pumping is concerned, the supply of water is rapidly available, at least for the bottom and second bottom lands of the larger streams. Experiments have also been reported from wells in the higher lands which have shown very large available supplies, but the means and methods of making wells and raising water are practical considerations which very properly are receiving marked attention from civil engineers and machinists, and it is not to be doubted that within a comparatively few years the development of the Great Plains region by irrigation and by the conservation of their moisture will have been well begun.

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Last month I cleared, after paying all expenses, \$235.38; the month before \$156.86 and have at the same time attended to my regular business. I believe any one, anywhere, can do as well, as I have not a particularly good location and not much experience. When you have an article that every family wants, it is very easy selling it. It seems strange that a good, cheap dish-washer was never before placed on the market. With the Perfection, which sells for \$5, you can wash and dry the dishes for a family in two minutes, without putting the hands in water. As soon as people see the washer work, they want one, and that is why so much money can be made so quickly. For full particulars address The Perfection Mfg. Co., 607 6th St., Englewood, Ill. I feel convinced that any lady or gentleman, in any location, can make \$5 to \$10 a day, as every family will very soon have a dish-washer. Try it and publish your experience for the benefit of others.

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A Caution From the Consulting Engineer State Board of Irrigation.

EDITOR KANSAS FARMER:—I am aware that I am less popular in some sections of the State than I should have been had I not thrown out cautionary suggestions. My duty, however, in these matters is plain.

You published, on the 1st, a table of evaporation, by Mr. Irish. The tables are supposed to give the averages. I have had these data for years and have thought best not to give them to the public for the reason that they may mislead. The average rainfall doesn't tell a man what he can depend upon. Neither does the average evaporation. The maximum evaporation is many times the average, and until there is a careful determination of the actual evaporation for months for a long period of years (which I hope the State Board of Irrigation will publish soon), I trust that no dependence whatever may be placed on averages.

Topeka, Kas. H. V. HINCKLEY.

Conserving Soil Moisture.

Prof. Roberts calls attention to experiments in soil tillage which showed that plats cultivated one and one-half inches deep evaporated 2,000 pounds less of water daily than plats having no cultivation. On a heavy clay soil this difference amounted to 4,000 pounds per day per acre. On a light garden soil it amounted to 2,500 pounds daily per acre. Referring to the influence of salt and plaster on the evaporation of water from soil, he says:

"A mixture of equal parts by weight of salt and plaster, applied to the land at the rate of 4,000 pounds per acre, conserved the moisture of the first four inches to the amount of fifteen tons of water per acre; that is to say, the soil which had been treated with this mixture contained, about two weeks after the mixture had been sown, fifteen tons of water per acre in the first four inches more than the adjoining plats which were not treated. This amount of water, it is true, is not large, but it was large enough during a drought, when the experiments were conducted, to furnish enough extra moisture to the growing oats to be easily discernible by the growth of the plant. There is not the slightest doubt that a weekly surface cultivation of orchards, from June until the last of August, greatly conserves the water in the soil, while at the same time culture sets free plant food, keeps the lower strata of the soil cool and moist. Wherever the conditions do not forbid surface cultivation it should be practiced extensively in orchards, for the three-fold purpose of conserving moisture, preparing plant food and shading that portion of the soil which is occupied by the roots of the growing plant."—*Rural World*.

Weather Report for April, 1895.

Prepared by Chancellor F. H. Snow, of the University of Kansas, from observations taken at Lawrence:

The warmest and driest April in twenty-seven years. The average temperature was nearly 2° higher than that of the hot April of the year 1878. It is rather a curious fact, however, that the maximum temperature fell below the March maximum. This month is the sixth consecutive month with deficient rainfall. The four months of this year have had a smaller precipitation than that of the same four months in the twenty-seven years of our observation.

Mean temperature was 60.42°, which is 5.64° above the April average. The highest temperature was 86.5°, on the 30th; the lowest was 32.5°, on the 1st, giving a range of 54.0°. Mean temperature at 7 a. m., 53.27°; at 2 p. m., 69.47°; at 9 p. m., 59.88°.

Rainfall was 0.74 inches, which is 2.37 inches below the April average. Rain in measurable quantities fell on seven days. The entire rainfall for the four months of the year now completed is 3.72 inches, which is 4.60 inches below the average for the same period in the twenty-seven years preceding.

Mean cloudiness was 35.80 per cent. of the sky, the month being 8.46 per cent. clearer than usual. Number of clear days (less than one-third cloudy), fourteen; half clear (one to two-thirds cloudy), eleven; cloudy (more than two-thirds), five. There were five entirely clear days and three entirely cloudy. Mean cloudiness at 7 a. m., 30.75 per cent.; at 2 p. m., 51.33 per cent.; at 9 p. m., 25.33 per cent.

Wind was southwest eighteen times;

northwest, fourteen times; north, seven times; south, three times; northeast, thirteen times; east, seven times; southeast, twenty-four times; west, four times. The total run of the wind was 12,708 miles, which is 1,032 miles below the April average. This gives a mean daily velocity of 423.60 miles, and a mean hourly velocity of 17.65 miles. The highest velocity was 75 miles an hour, from 9:10 to 9:25 p. m. on the 5th.

Barometer.—Mean for the month, 29.016 inches; at 7 a. m., 29.037 inches; at 2 p. m., 29.004 inches; at 9 p. m., 29.003 inches; maximum, 29.432 inches, on the 12th; minimum, 28.378 inches, on the 6th; monthly range, 1.054 inch.

Relative Humidity.—Mean for the month, 57.06 per cent.; at 7 a. m., 67.64; at 2 p. m., 44.12; at 9 p. m., 59.42; greatest, 92, on the 1st and 6th; least, 15.5, on the 13th. There were no fogs.

Publications of United States Department of Agriculture for April.

[All applications for the publications of this department should be addressed to the Secretary of Agriculture, Washington, D. C.]

The Mexican Cotton-Boll Weevil. Pp. 5. (Circular No. 6, new series, Division of Entomology.)

Kentucky Highways. History of the Old and New Systems. Pp. 24. (Bulletin No. 13, Office of Road Inquiry.)

A Manual of Instructions to Crop Correspondents. Pp. 28.

Synopsis of Report of Statistician—April, 1895. No. 125. Pp. 4.

Report of the Statistician—April, 1895. No. 125. Pp. ii, 107-168. Contents: Condition of winter wheat; farm animals; number of families occupying farms owned, free and encumbered; amount of incumbrance on farms; health of the people; production, imports and exports of potatoes; production and prices of wool in Italy; potatoes and hay in Great Britain in 1894; cotton crop of India for the year 1894-95; rice crop of India for 1894; report of European agent; transportation charges.

Report of the Director of the Office of Experiment Stations for 1894. Pp. iii, 123-181, from the Report of the Secretary of Agriculture.

Report of the Chief of the Division of Records and Editing for 1894. Pp. iii, 171-184, from the Report of the Secretary of Agriculture.

Experiment Station Record, Vol VI., No. 6. Pp. vii, 489-584. (Not for general distribution.)

Wide Tires. Laws of Certain States Relating to Their Use, and Other Pertinent Information. Pp. 16. (Bulletin No. 12, Office of Road Inquiry.)

Circular of Information Relating to the Display of Wind Signals on the Great Lakes. Pp. 23, pl. 1. (Weather Bureau.)

Report on the Condensation of Atmospheric Moisture. Pp. 104, pls. IV., fig. 27. (Bulletin No. 12, Weather Bureau.)

Information Relative to the Investigation of the Influence of Climate on Health. Pp. 7. (Circular No. 4 of Sanitary Climatology, Weather Bureau.)

Surface Currents of the Great Lakes, as Deduced from the Movements of Bottle Papers During the Seasons of 1892, 1893 and 1894. Pp. xiv, charts 6. (Bulletin B, Weather Bureau.)

Charts of the Weather Bureau. (Size 19 x 24 inches.)

Weather-Crop Bulletin (series of 1895), reporting temperature and rainfall with special reference to their effect on crops. (No. 3, for the month of March, and Nos. 4, 5, 6 and 7 for the weeks ending April 8, 15, 22 and 29.)

Semi-daily Weather Map, showing weather conditions throughout the United States and giving forecasts of probable changes.

REPRINTS.

Milk Fermentations and Their Relations to Dairying. Prepared in the Office of Experiment Stations from Experiment Station Bulletin No. 9. Pp. 24. (Farmers' Bulletin No. 9.)

A General Index of the Agricultural Reports of the Patent Office for Twenty-five Years, from 1837 to 1861; and of the Department of Agriculture for Fifteen Years, from 1862 to 1876. Pp. 225.

Culture of the Sugar Beet. Pp. 24, figs. 9. (Farmers' Bulletin No. 3, Division of Chemistry.)

Foods: Nutritive Value and Cost. Pp. 32, charts 2. (Farmers' Bulletin No. 23, Office of Experiment Stations.)

Peach Yellows and Peach Rosette. Pp. 20, figs. 7. (Farmers' Bulletin No. 17, Division of Vegetable Pathology.)

Proceedings of the National Road Conference, held at Westminster Church, Asbury Park, N. J., July 5 and 6, 1894. Pp. 63, figs. 3. (Bulletin No. 10, Office of Road Inquiry.)

Some Destructive Potato Diseases: What They are and How to Prevent Them. Pp. 8, figs. 3. (Farmers' Bulletin No. 15, Division of Vegetable Pathology.)

Fertilizers for Cotton. Pp. 31. (Farmers' Bulletin No. 14, Office of Experiment Stations.)

Sweet Potatoes: Culture and Uses. Pp. 30, figs. 4. (Farmers' Bulletin No. 26, Office of Experiment Stations.)

Publishers' Paragraphs.

The 1895 catalogue of Sargo Machinery and Fruit Evaporators should be in the hands of our readers interested. It will be sent free to any one mentioning this paper and addressing the Blymyer Iron Works Co., Cincinnati, O.

Now is the time to buy.—If you are thinking of buying an incubator or brooder this season now is the best time to buy. Write to the Reliable Incubator and Brooder Co., at Quincy, Ill., for their special sixty-day offer. Write at once.

E. B. Winger, the "windmill man," of Chicago, writes: "I am having a whaling good trade now, and if every other manufacturer is selling as many windmills as I am the people of the country are getting them lively." Write him for catalogue and prices.

The frontispiece of the *Review of Reviews* for May is a reproduction from a recent Washington photograph of the United States Supreme court. The picture is of more than ordinary interest because of the present prominence of the individual members of the court in connection with the income tax decisions.

ANOTHER GRAND GOLD MEDAL AWARDED.—A cablegram, just received by the Whitman Agricultural Co., of St. Louis, Mo., announces the awarding of grand gold medal on their baling presses by the Montevideo, Uruguay, S. A., exposition. This firm have received gold medals and special grand prizes throughout the world on their baling presses.

Mr. M. Butterfield, proprietor of the Lee's Summit Star Nurseries, of Lee's Summit, Mo., in remitting for his advertisement pays the following merited compliment to the *KANSAS FARMER* as an advertising medium. He says: "We have enjoyed a splendid trade this season and the results from our advertisement in your paper were entirely satisfactory. Another year we will again use your paper for our advertisement."

Union Pacific Route.

What you want is the through car service offered between Denver and Chicago via the Union Pacific and Chicago & Alton railroads, which is unexcelled by any other line. Magnificent Pullman sleepers, dining cars and chair cars, run through daily without change, Denver to Chicago via Kansas City.

"What will the harvest be," depends much upon providence, but largely, too, upon human methods employed during the next few weeks.

Rural arithmetic: Multiplying gardens will divide grocery bills, add to the family income, and subtract many of the discomforts of farm life.

\$100 Reward \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer one hundred dollars for any case that it fails to cure. Send for list of testimonials.

Address, F. J. CHENEY & CO., Toledo, O.

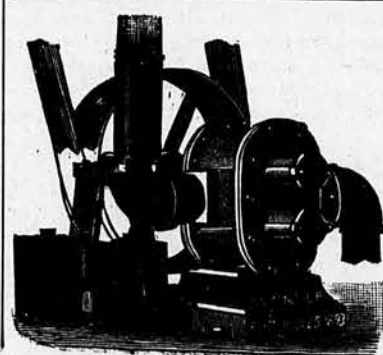
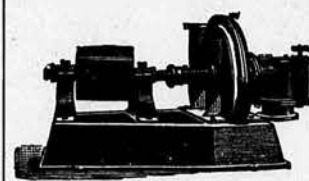
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Write for Information of the Sunny Grand Valley of Colorado

The Home of the Peach and other Delicious Fruits. The land of perpetual sunshine, where there are neither blizzards, cyclones, nor malaria; where the fruit crop never fails, and the farmers are prosperous and happy.

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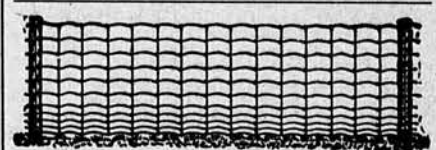
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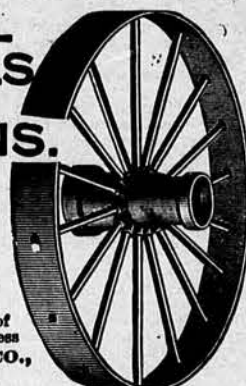
OUR FIRST CATALOGUE.

Fence nine years old, "going on ten." Company six years "coming seven." Chosen by acclamation to lead the procession; it is time to discard knickerbockers and put on pantaloons. Heretofore we have had nothing but a folder circular to explain the coiled spring principle. We can now furnish the finest fence catalogue issued, with photographic views of our different styles in actual use. It will repay anyone intending to build fence, to write for a free copy.

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Steel Wheels with Removable Boxes. Steel handles, heavy Steel Axle; light, strong and durable; nicely finished. Will ship you any quantity, one or more as desired, at the following net prices, payable in 60 days, or 5 per cent. discount for cash with order.

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WILL YOU distribute Circulars and samples for us? No cost. Send 10c. for 100. Address: ADVERTISING BUREAU, 447 6th Ave., NEW YORK CITY.

The Home Circle.

To Correspondents.

The matter for the HOME CIRCLE is selected Wednesday of the week before the paper is printed. Manuscript received after that almost invariably goes over to the next week, unless it is very short and very good. Correspondents will govern themselves accordingly.

HOW BEAUTIFUL.

How beautiful is rest,
After the long and wearying day of care,
When motionless the fervid summer air,
To feel that toil and striving are all done,
To watch the fields and hills at set of sun,
Type of that land by every nation blest—
How beautiful is rest!

How beautiful is sleep;
After the fever leaves the throbbing veins;
To close the eyes tended by fond love's pains,
And 'neath the shadows of the earthly streams,
To gently glide into the land of dreams,
Where memory and fond youth their visions keep—
How beautiful is sleep!

How beautiful is love—
The heart that beats in sympathy with thine,
The smile that lights the earth with rays divine,
The song that soothes the soul in pain and woe,
The hand that clasps thine own when hot tears flow,
The tender tone, like music from above,
How beautiful is love!

How beautiful is hope,
When breaking storm-clouds show the blue sky rifts,
After the snow melts and the vapor lifts,
When spring returns and the white dove draws near,
To dwell with us, type of the Spirit dear,
When rainbow arches crown life's mountain slope—
How beautiful is hope!

How beautiful was peace,
When brothers met in strife that foes abhor,
On crimson fields of internecine war—
When fond hearts bled far o'er a shuddering land,
While brave souls fled to join the seraph band—
When triumphant tones proclaimed that war might cease—
How beautiful was peace!

How beautiful is death!
After all care and pain and toil are o'er
To close the eyes upon this earthly shore,
Followed by memories of undying love,
Welcomed by guardian angels from above,
How tranquil to resign this laboring breath,
How beautiful is death!
—Boston Traveller.

NEAT LAUNDRY BAG.

How to Make a Pretty Receptacle for Soiled Linen.

For persons who do not care to give up space to a large basket for holding soiled linen a laundry bag is the only resort. This may be made of plain



tickling or may be elevated to the rank of a decorative object, and it is a laundry bag of the latter description that is illustrated. It is made of strips of heavy canvas embroidered in a cross stitch tapestry design separated by bands of colored crocheted insertion. The bottom of the bag is finished with a crocheted edge to match. The embroidered sides are divided by straight plain pieces to make the bag capacious, and the whole thing is lined. The top of each side has small brass rings attached at intervals, through which are run brass rods which hold the bag in shape.—Cheerful Moments.

Changing One's Style of Dress.

The woman with a talent for dress says: "A great number of women ruin their appearance by not changing their style of dress when nature changes their style of looks. A woman does not keep one style all her life; she starts out blonde and thin; within ten years she becomes much darker in effect and becomes broader and stouter; but ten to one she clings passionately to the colors and general character of gowns and bonnets that were always becoming to her. She is a lost woman. She is sure to look passe. It is a great thing not to fall into a rut in clothes; look with a single mind at the present effect of the things you try on."

Refreshments at a Card Party.

A menu for a card party consists of oyster patties, celery, rolled bread, cocoa, individual creams in the form of grapes, apples and pears, and small cakes. For an afternoon card party, when the guests constitute a club, meeting weekly at different houses, much simpler refreshments should be offered, as an elaborate menu spoils the appetite for dinner and upsets the digestion to a degree that should not be encouraged to anyone but one's enemies. Wafers, tea and chocolate, or sandwiches of a light and appetizing variety, a light salad, like sweetbread, or a chestnut salad with thin slices of brown bread, buillion and wafers, or cream, very light cakes and coffee, or two or three articles that are not too heavy should be the limit.

Cheese Pudding.

Mix a pint of fine bread crumbs with a small cupful of grated cheese and add a tablespoonful of butter and salt and cayenne to taste. Pour over them from two to four well-beaten eggs mixed with a large cupful of milk; beat briskly together, turn into a buttered dish and bake in a hot oven about forty minutes, or until the pudding is set and the surface brown and crackling. This is an excellent supper dish, or supplementary dinner dish when you have a light meat course.—Country Gentleman.

Scalloped Tomatoes.

Take one quart can of tomatoes and season with one teaspoonful of salt, half a teaspoonful of pepper, a teaspoonful each of sugar and onion juice, one heaping tablespoonful of minced parsley and a tablespoonful of butter. Butter a deep dish and sprinkle with

fine crumbs. Pour in the tomatoes, cover the top with fine bread crumbs and bits of butter. Bake in a moderate oven an hour and a half to two hours.—Boston Budget.

A Terrible Rumor from Paris.

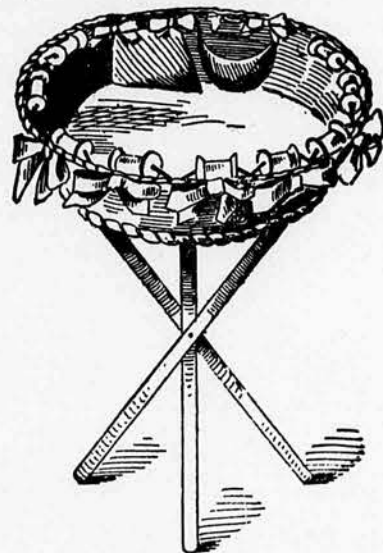
A rumor comes from Paris that parted hair is not to be the fashion much longer; that, even more trying still, the pompadour roll surrounding the face is to be the thing. If this be so, then for a return of the rats. Those curious abominations of our mothers' time over which the hair is brushed will once more be used. With the hair brushed back in this fashion it is to be arranged in the shape of a figure eight, quite high at the back of the head, and the Psyche knot, which has been with us long enough to become modified into quite a graceful arrangement, will have to go.

HANDY SEWING BASKET.

Easily and Quickly Made at Home at Small Expense.

In the bottom of a light, round willow basket 13 inches in diameter by three inches deep, is fitted a circle of pasteboard smoothly covered with lining silk over a thin layer of wadding. This is all the lining required. Around the upper part of the basket inside, nine spools, a pincushion and a shirred pocket for thimbles are fastened all in a row. The nine spools (No. 20, 36, 50, B sewing silk and shoe thread, black; No. 20, 40, 60 and basting cotton, white) are each strung on a piece of ribbon half an inch wide by at least 14 inches long. Each ribbon end is brought through to the outside of the basket just below the brim. The dainty pincushion, two inches square, and the

thimble pocket of the same material, have ribbon ties tacked with tiny bows to their upper corners. These are also passed through to the outside where by tying the 11 pairs of ribbon ends into



neat bows the trimming of the basket is completed.

Arranged in this way the threads cannot become tangled, an empty spool is easily replaced and there is plenty of room left for all the other necessary furnishings of our handy sewing basket.—American Agriculturist.

Interesting circulars sent to farmers. Send name to Bureau of Immigration, Spokane, Wash.

Agents wanted for Gearhart's Family Knitter. For particulars address J. E. Gearhart, Clearfield, Pa.

Absolutely Pure

The Young Folks.

THE CHANGELINGS



I dreamed (we scribbling folk, you know,
Have funny dreams sometimes,
Else, pray, how could we spin our yarns
And weave our merry rhymes?)

I thought two proud and fond mammas
Each on a bright spring day
Went walking with her little girl,
As happy mothers may.

Now one before the other went
Some fifty years or more,
And you may guess how different were
The gowns and hats they wore.

A roughish elf—the kind, you know,
That only live in dreams—
Observed the sight, and laughed to see
Dame Fashion's odd extremes.

"Ho, ho!" he cried. "A little trick
I'll play these pretty dears!"
And in a twinkling he exchanged
The children and their years.

Each little daughter tripped demure
Beside the wrong mamma,
Who all unconscious sauntered on
With eyes that looked afar.

Until, just where the crossroads meet,
Down glancing as she smiled,
With start and frown each wondering dame
Beheld her changeling child.

Alas! what looks of dire dismay!
What woeful, shocked surprise!
That fairly laughed until the tears
Stood in his elfin eyes.

But when the little damsels wept
To see their mothers' pain,
Repenting of his naughty prank,
He changed them back again.

And, as I wrote, two fond mammas,
Still pale with such a fright,
Each holding fast her daughter's hand,
Went whisking out of sight.
—Margaret Johnson, in St. Nicholas.

BRAGGING IS FOOLISH.

It Is Far Better to Let Other People Sing
Your Praises.

In some paper lately "bragging" was
spoken of as a "sin," and the especial
sin of the American people. But this
is a charge which is not entirely true.

Bragging is by no means confined to
the American people. And bragging is
scarcely a "sin," although it is a pro-
nounced form of silliness. For many
reasons, all sin is foolish. Of course,
just as there is no boy so great a fool
as the boy who does what he knows to
be wrong and who expects to gain
something by doing it. That can't be
done, and no one knows it better than
the boy who has tried it.

In the first place the braggart is fool-
ish who brags of what he is going to
do or going to have or going to be.
What's the use? People don't want to
hear you tell of what you are "going to
do." All they answer is: "Well, do it!
Have it! Be it! Then talk!" There-
fore, don't talk beforehand. That is
foolish. Wait! People don't believe
you. They will laugh at you.

And again, the braggart is foolish
who talks of what he is, of what he
has or what he does, in the present. It
is foolish because it is unnecessary. If
he is noble or great or brave he has no
need to talk about it at all. People will
know it. If he is doing a great deed he
adds to the greatness of it by letting
his deed speak for itself. Be sure if the
deed is a grand one it will speak for
itself. People cannot help hearing or
seeing. So don't boast of what you are
or have to do. Let your actions speak
for you.

And once more the braggart is fool-
ish who boasts of what he used to be
or to have or what he used to do. Why?
Because if people do not know what
you have done or been to they will only
laugh at your loud boasting. And if
they do not there is no need for you to
speak of it at all, and you believe you

own act when you 'boast of it. The
wise way is to make what you do so
great that it speaks itself, for that is
what actions do if they are great
enough. And then all you have to do
is to sit quiet and let other people sing
your praises.

If bragging is a "sin" it must be the
silliest sin there is. And that is saying
a great deal.—N. Y. World.

YOUTHFUL MARKSMAN.

Little Willie Douglass Is a Sure Shot at
Forty-Five Feet.

There is a secret desire in every Amer-
ican boy's heart to become the sole pro-
prietor of a gun which will shoot real
powder and bullets. As he reads of the
heroes of the French and Indian wars
he wishes that these stirring times were
of the present day. Then he thinks of
how, with a trusty rifle, he would have
gone forth against the savage red men.
It is no idle day dream. He is only
showing the true American spirit and
pluck which is strong in every boy born
in this great country of ours.

The famous rifle shots have all begun
when they were boys! Daniel Boone



WILLIE DOUGLASS.

could accomplish wonderful feats with
his flint-lock rifle before he had out-
grown his teens.

Col. William Cody, familiarly known
as Buffalo Bill, had achieved fame as a
sure shot before he had reached his
twenty-first birthday.

There are few boys who have an op-
portunity to develop skill with firearms
nowadays. Those who do usually live
in the west or in the rural districts.
Every now and then one of these lads
comes to the front to prove that America
leads the world in the handling of this
favorite weapon of the frontier.

We recently learned of a youth whose
record is so good that every boy will
wish to learn more of him. This young
rifleman is Master Willie Douglass, of
Lafayette, Ind. He has been shooting
but a short time, but has shown a won-
derful proficiency already. The illus-
tration presented herewith shows Mas-
ter Douglass; also his targets, with
shots made at a range of 45 feet. It
shows a score which counts 97 out of a
possible 100. The target shown is full
size.

Willie Douglass, this youthful disciple
of Leather Stocking, says the New
York Recorder, is about 10 years of
age. He weighs 51 pounds—just a trifle
over five times as much as his rifle.
This handsome model of the gun-
maker's skill he handles as correctly
as does a veteran marksman. He is
very cool and reserved in manner. He
has a pair of keen, steel-gray eyes, and
is a youth of striking appearance. His
rifle is a .22-caliber. Willie Douglass is
very fond of his rifle and the sport it
affords him. He has a medal which
shows his prowess.

An Effectual Warning.

It is well known that certain vaga-
bonds desire nothing better, especially
when the cold weather comes on, than
to be arrested and locked up, in order
that they may be taken care of for
awhile. One of this fraternity succeed-
ed in getting himself arrested for vaga-
rancy, and on the way to the lockup
he was so much overjoyed by the pros-
pect of not having to sleep in the open
air that he behaved somewhat boister-
ously.

"Peep quiet!" threatened the police-
man. "If you don't, I'll let you go!"

PATRIOTIC PIGEON.

After Four Years of Captivity in Berlin It
Returns to France.

Many instances are on record of
tenacity of memory on the part of car-
rier pigeons, who are said never to for-
get their first cote. None of these in-
stances are more remarkable, prob-
ably, than that recorded of one
of the birds employed to carry
messages into Paris during the siege.
These birds, domiciled in Paris, were
taken out by balloons, and after being
laden with tidings from without, were
liberated, and made their way back to
their homes.

One day a pigeon from one of these
balloons was captured by a German
soldier of the besieging army. He
gave it to his officer, who presented it
in turn to his commander, Prince Fred-
erick Charles. The prince sent it as a
gift to his mother in Germany, who
happened to be somewhat of a pigeon
fancier.

The princess, delighted with the gift,
placed the captive in a great dove-
cote, where it was surrounded with
every luxury that the most exacting
bird could ask for, but whence it could
not escape.

Here the French pigeon lived, appar-
ently happy enough, for four long
years. But it did not forget its father-
land.

One day a door of the great dove
cote was left carelessly open. The
French pigeon flew out. It was never
seen by its German hosts; but ten days
later it was beating its wings against
the doors of its old cote in the Boul-
vard de Clichy, Paris. It was recog-
nized by its old keeper, and received
the welcome due to a patriot returned
from a long captivity.

Crabs Marching to the Sea.

A curious point in the history of the
West Indian land crab is the fact that
every year, when the rainy season has
set in, they make a great excursion to
the sea. Straight as a bee to its hive,
they march to the coast. If a wall or
rock comes in their way, they climb
over it instead of going around. If a
house is the obstacle, they will seek to
get through the doors or windows; but,
if this is not possible, they will climb
over it. Those that fall back from
considerable heights and get damaged
in the tumble serve as food for their
companions. So closely do these crabs
march together, that the noise of their
shelly armor as they jostle each other
resembles the rattling of the arms and
accoutrements of a regiment of cuiras-
siers.

Press the Button, Please.

Little Ben lives in a new house, one
of the most modern of modern houses,
where light, water, heat and other
things are all to be had by turning a
knob or touching a bell. He lives in a
state of perpetual marvel over these
things, and the other night, when suf-
fering from a headache, the little fellow
said to his mother, who sat beside him:
"Please turn on the dark, mother; my
eyes hurt me."

It All Depends.

"Bobbie," said the teacher, "spell
eye."

"Which do you mean?" said Bobbie.
"The eye you see with or the I you say
one with?"—Harper's Young People.

Ask your neighbor to subscribe for the
KANSAS FARMER.

HIGHEST QUALITY OF ALL.

Columbia Bicycles

THE STANDARD
FOR ALL.....POPE
MFG.
CO.Hartford, Conn.
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BUFFALOAn Art
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One dollar and sixty-five cents will pay for the *KANSAS FARMER* and the twice-a-week *New York World*. Everybody should read.

We want our readers to secure for us thousands of new subscribers for the *KANSAS FARMER* and we will pay well for such work. If you will get up a list, write this office for liberal terms.

Any of our subscribers who are about to renew subscription will find something interesting by reading the advertisement of "Samantha at Saratoga." If you have already renewed your subscription it will tell you how to get the book at the reduced rate.

The company which is developing the power of Niagara Falls makes a price of \$20 per horse-power per year for local users. A price has been made for the city of Buffalo which is estimated to make the cost of electric power delivered at that city \$36 per horse-power per year.

The liberal rains which have occurred during the last few days throughout most of the grain-producing sections of the United States, were used by the "bears" on the grain markets as a means of depressing prices. Thereby many speculators were able to save losses or to make profits.

When the returns of the cattle situation are all considered, it is found that there is a shortage of about 15 per cent. It is not impossible that the 85 per cent. will bring more money to the owners than they would have received had the production been 15 per cent. over rather than under the normal demand.

A bulletin has just appeared from the State University on the "Stratigraphy of the Kansas Coal Measures," by Prof. Erasmus Haworth. This shows a beginning of geological work in this State on a common-sense basis and on a plan sufficiently comprehensive to embrace the entire State. But the chief merit of the work lies in the fact that it presents the subject of geology in so plain and simple a way as to be readily understood by those who have little or no previous technical knowledge of the subject. Further, it deals with matters of practical value to the people of the State. Such a survey as is here presented in its beginnings can be rapidly carried forward by stages, and when completed will be of immense advantage and should save many times its cost to those whose industries have to do with sub-surface resources.

WINDMILL POWER.

For the various purposes for which power is needed on the farm, no other agent presents promise of cheapness as does the wind. The dweller on the plains is sure that it blows at least three-fourths of the time, and is not disabused of this error until he has erected a windmill for some purpose which demands almost constant power, when he becomes aware that it blows only about one-third of the time. But, notwithstanding its inconstancy, it is still true that power enough passes unused over each quarter section of Kansas land during almost every week of the entire year to plow that quarter section, and to subsoil it, too, if only the wind were harnessed to the work.

In the early days of eastern Kansas a young man, since known as Chief Justice Horton, accompanied Horace Greeley on a drive up the Kaw river to the site of the present city of Topeka. The noted editor talked, all the way, of the day when windmills would stud the entire route and pump water, to be used in irrigation, into reservoirs upon the hills, and was enthusiastically positive that such arrangement and the resulting prosperity would make every tillable acre worth \$500. The century, then but past its meridian, is now old and the reservoirs have scarcely begun to appear in eastern Kansas. True, they are coming thick and fast in western Kansas, and the State itself is helping in the experimenting.

Horace Greeley did not overestimate the value of irrigation in increasing and making sure the productive power of the land. It is by some questioned, however, whether he indicated the most desirable source of power to raise the water. In his day little was known of the power of windmills, and when we look for exact information it is astonishing how little is yet available. Authorities on the subject disagree on almost every proposition. A table was prepared many years ago by A. R. Wolf, M. E., giving results of the operation of windmills. No doubt much improvement has lately been made in the construction of mills. The introduction of the curved steel sail is claimed to have added at least 50 per cent. to the power of a given size of mill. Wolf's tables were constructed before the introduction of the steel sail.

Diameter of mill.	Revolutions of wheel per minute.	Water raised per minute to an elevation of—			Power developed.			Cost per hour.		
		25 feet.	50 feet.	100 feet.	200 feet.	Actual.	H. P.	Actual.	H. P.	Cent.
8.5	70 to 75	6.16	3.02	4.75	6.00	.60	.12	.60	.15	5.8
10	60 to 65	19.18	9.56	14.34	18.00	1.83	.28	1.83	.45	5.3
12	50 to 55	45.14	22.57	34.35	42.00	4.23	.61	4.23	1.35	4.6
14	40 to 45	97.68	49.16	72.42	84.00	8.46	.78	8.46	2.25	4.3
16	35 to 40	124.95	62.47	93.75	108.00	10.80	1.34	10.80	3.32	3.2
20	30 to 35	212.38	106.19	159.28	198.00	19.80				

The Stover Manufacturing Co. has recently published a table of pumping capacities of windmills, from which, for the purpose of comparison, we take data as to a few sizes of mills and place it in the same form as Wolf's table.

One of the best informed and most efficient engineers now dealing with the problem of lifting water is Ira C. Hubbell, manager for Fairbanks, Morse & Co., at Kansas City. Mr. Hubbell estimates that in a twenty-mile wind an eight-foot steel geared mill will develop one horse-power, and that 40 per cent. of this power may be realized in water pumped. For other sizes of mills he estimates that the power is

proportional to the squares of their diameters. While Stover's estimates of power developed are very much greater than those given in Wolf's tables, Mr. Hubbell's exceed Stover's for the smaller sizes, but do not increase so rapidly as either of the others with increase in the size of the mill. Thus, for an eight and one-half foot mill Wolf gives only four-hundredths of a horse-power, while for an eight-foot mill Mr. Hubbell gives forty-hundredths of a horse-power. For the twenty-five foot mill Wolf gives 1.34 horse-power, while for the same size Mr. Hubbell's figures would give 3.90 horse-power. It is worthy of note in this connection that a thoroughly responsible concern guarantees its machinery according to Mr. Hubbell's estimates. It is not impossible that the improvements made in construction since Wolf's tables were prepared have been so great as to cover the differences in the figures. It is difficult to discover in Wolf's tables any law for the increase of power as the size of the windmill is increased. The increase is, however, much more rapid than the surface of the mill, which is proportional to the square of the diameter used by Mr. Hubbell.

Without troubling to ascertain how much power windmills have developed, farmers have found them quite satisfactory for pumping water for stock and for grinding moderate quantities of feed. Their use for raising water for irrigation has made a much more sure test of their capacities and has resulted in so loading them as, in many instances, to overtax not so much the power caught by the sails as the strength of the working parts. Manufacturers have laid great stress upon the ability of their mills to "govern out" of the wind in case of a gale. Irrigation demands that they furnish mills capable of using the power of the gale as well as of the moderate wind. A prominent manufacturer recently made a tour of mills, furnished by him, to observe the effects of a storm. He concluded that mills have been made with more sail than strength of working parts. The demands of the customer for cheapness and of the stockholder for profits have placed the managers of manufacturing establishments between two fires. But the time is now here when the twin demands for greater strength and more power are to be made more persistently than that for cheapness. For irrigation, the small mill can only serve for the gardener. The farmer who irrigates by wind power must have a mill capable of giving at least a few horse-power and strong enough to work in a heavy wind.

Referring again to Wolf's table, it will be seen that as to cost of power furnished, the advantage is all with the larger mills. The entire cost of windmill power is for interest on investment and maintenance of the mills. The investment should not be greater than for other small engines and the maintenance ought to be reduced by proper construction to a level with the expense of maintaining other machinery. It cannot be said that such is the case yet, but with the greater demand for good mills the cost is being reduced and the wearing qualities are being improved by the best manufacturers. The fact that the best windmills, when properly proportioned to the work expected of them, require little attendance is in their favor. The indications point to the extension of the use of the windmill for light service on the farm, especially for such work as is not necessarily done at a specified time and for such as may be anticipated. If manufacturers shall promptly meet the rapidly developing demand for thoroughly reliable mills of several horse-power, their field is a most inviting one, especially in the irrigation districts.

Some of the old Kansas friends of Henry Wallace, formerly editor of the *Iowa Homestead*, will doubtless like an opportunity to continue to read the emanations from his able pen. He is now editing *Wallace's Farm and Dairy*. By special arrangement we are able to send *KANSAS FARMER* and *Farm and Dairy* for one year for \$1.25.

FLAX SEED.

A good deal of interest is manifested, just now, in flax seed. Present prices are high and those interested as buyers and consumers are anxious as to future supplies. In a recent issue the *Chicago Tribune* presents the arguments in favor of liberal sowings this spring, as follows:

"Judging from the present outlook American farmers need have no fears of raising too much flax seed. Some speculators have been talking for effect in the strain that the decreased acreage of wheat in the middle West and Northwest meant the sowing of such quantities of flax seed that the market would be glutted with the next crop this fall. Such conclusions are not warranted by the facts now in hand. Receipts for some time past have never been so light for a corresponding period of the year in the history of the trade, and stocks are small all around. On the other hand, the demand for oil and cake is a healthy and steady one and bids fair to continue so. The La Plata crop will not cut the figure expected, and as for the Argentina, England is taking, and will in all probability continue to take, all that is forthcoming from that source and more. Speaking of the situation, the *Oil, Paint and Drug Reporter* says:

"For a week or two past the market has been unsettled by reports that the Argentina seed crop was one of enormous proportions and would be marketed here at a very low price. It is now stated that the Argentina output of seed is several millions less than was reported, and that all that is to be sent to this country is either here, afloat, or about to be shipped."

On the following day the *Tribune* contained the following quotations of the flax seed market:

"Flax seed was firmer, due to the light supply. No. 1 Northwestern sold at \$1.44, an advance of $\frac{1}{2}$ cent over former bids. Rejected sold at \$1.39 for good quality. May advanced $\frac{1}{2}$ cent, selling at \$1.43 $\frac{1}{2}$. The first transaction in the September delivery was a sale of 5,000 bushels by Wear to Logan at \$1.15, an advance of 3 cents over former bids. Receipts were five cars; shipments, 4,685 bushels."

Quite likely the demand for oil will, in the near future, be large. The revival of prosperity must bring with it a disposition to paint up buildings which have been long neglected. This, with the participation in the general demand for agricultural products, may sustain prices. Doubtless the demand for the next crop will make good the views expressed by the *Chicago paper*.

HOW TO SOW ALFALFA.

In answer to several inquiries concerning alfalfa and how to sow the seed, we reproduce the directions as given by McBeth & Kinnison, of Garden City, Kas., which appeared in the columns of the *KANSAS FARMER* quite a while ago. These gentlemen are prominent producers of alfalfa seed, and what they say regarding the matter may be considered as authority. Alfalfa is growing more and more into public favor, hence the information merits a careful study. The directions given are as follows:

"It is generally considered best to sow alfalfa on fall plowing. If no land which it is desired to seed was fall-plowed, however, early spring plowing may be made to do nearly as well. Plow the ground deep—you can't plow too deep—as soon as it is dry enough to work, and harrow it well. The harrowing should be repeated every few days until seeding time, both to keep down all weed growth and to reduce the surface soil to the finest possible tilth.

"Alfalfa seed should not be sown very early. It is well enough to sow red clover while there is yet frost in the ground, and before spring is more than a promise, but alfalfa seeding should be deferred until warmer weather. Nothing is gained by sowing earlier than the middle of April, and there is seldom loss through waiting until May. Light frosts do not kill the young plants, but they so retard their growth that later-sown plants often make the best showing by June 1.

"Liberality in the use of seed is advisable. It is very difficult to re-seed thin patches, and the best plan is to guard against having those thin patches by heavy seeding. The rule is to sow twenty pounds of seed per acre, but this will bear some modification. On bottom land, if the soil is in good condition, and you intend to roll well

after seeding, fifteen pounds per acre will be ample to produce a thick stand. If the soil is not in the best condition for the germination of the seed proportionately more will be required. On upland, twenty pounds of seed per acre is the minimum amount to be recommended, and if the ground is not in good condition it will be economy to sow twenty-five pounds.

"Some alfalfa-growers still follow the practice of seeding with a nurse crop, but there is little in favor of this method and much against it. The removal of the nurse crop is always at a time when heat and dry weather are very hard on the unprotected young alfalfa plants. If any nurse crop is sown it should be harvested with a header, so that there may remain a considerable length of stubble to serve as protection for the alfalfa.

"The seed may be sown either broadcast or with a drill, but whichever method is selected, care should be taken that the seed is well covered. Common grass seed needs but the slightest covering, but alfalfa, like all leguminous plants, does better with moderately deep seeding. An inch is none too deep. After seeding, the ground should be run over with a roller, to pack the earth firmly about the seed and insure its early germination and rapid growth."

Weekly Weather-Crop Bulletin.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending May 6, 1895—T. B. Jennings, Observer Weather Bureau, Director:

CONDITIONS.

Fair rains have fallen over the greater part of the State, with good rains in McPherson, Reno, Harvey, Sedgwick and Cowley, and a large part of the Eastern Division, and very good rains in Atchison, Leavenworth, Douglas, Johnson and Franklin. The least rainfall occurred through the central counties from Osage and Coffey to the west line of the State. The temperature has been much above the normal in the Eastern Division, but more nearly normal in the Western.

RESULTS.

EASTERN DIVISION.

In the eastern counties, from Neosho and Crawford to the north line of the State, it has been a fine growing week and the rains have enabled crops to go ahead of the chinch bug. Wheat in the eastern part of Osage and Western part of Franklin is finer probably than in other parts of the division. Cut-worms have become injurious in Wilson and Elk. Fruit still gives good promise.

Brown county.—Fine growing week; early-planted corn a good stand and growing rapidly; small grain, pastures and meadows doing well; garden vegetables forward.

Marshall.—Conditions all favorable to crops, causing everything to make a wonderful growth.

Atchison.—Everything in perfect growing condition.

Pottawatomie.—Rain has stopped chinch bugs in north part; springs are running strong; rye thin and heading short; other crops well.

Riley.—Corn planting nearly completed; the rain has done much good and furnishes plenty of stock water.

Geary.—Severe hail of 1st did much damage to fruit and garden truck.

Johnson.—The rains have brought everything forward finely.

Douglas.—Corn and potatoes up and doing well.

Osage.—Good rains have greatly improved crops in east half; very light rains in west half.

Coffey.—Chinch bugs and drought have done much damage already to wheat and oats, but the copious rains have benefited all crops except in the northwest corner.

Woodson.—Wheat and oats on the river much damaged by bugs and drought; corn on the prairie looks well, though small.

Wilson.—Wheat looking badly; oats mostly gone up, and corn on stubble ground being cleaned up by cut-worms, (much complaint of this pest, a small black worm three-fourths inch long); these rains have revived everything.

Elk.—Cut-worms working on corn,

potatoes and gardens; cherries and plums falling badly.

Cherokee.—Wheat much injured; fruit of all kinds plenty except strawberry crop.

Montgomery.—All fruits suffering for a soaking rain; wheat heading out very short; corn making slow growth.

Chautauqua.—Will have not more than one-half crop of wheat, probably not that; corn in fine shape; oats and flax small but improving with these rains.

MIDDLE DIVISION.

All crops in the northern counties are in good condition, and from McPherson to Cowley they have improved decidedly during the last days of the week. Fruit has been dropping badly in some districts, from the dry weather, but is doing better since the rains. Much corn remains ungerminated because of the dryness of the soil.

Jewell.—Good growing week; oats fine; corn coming nicely; larger acreage than ever before.

Phillips.—Some wheat left; corn nearly all up; fruit offers a good crop; rain needed.

Clay.—Small grain growing fairly; corn coming up unevenly; more rain needed for both; fruit not setting full.

Mitchell.—No wheat to report; corn is in all stages of planting, and is coming up; oats now doing well; these rains revived crops and the farmers.

Osborne.—Wheat fields nearly all in corn, of which an immense acreage is going in and coming up nicely.

Ottawa.—Corn planting nearly done; early planting a very good stand; wheat, oats and grass needing rain.

Ellis.—Wheat no better; oats and

on it. Wheat is doing no good in the central or southern counties, while in the southwestern small grains and grass are at a standstill.

Norton.—Very favorable week; corn coming up; the good prospects are inducing a larger acreage of corn than anticipated.

Decatur.—Week of rapid growth, with ground in fine condition; a good share of the corn planted and coming up.

Graham.—A fine week for farming, which has been vigorously pushed in all departments; corn coming up.

Sheridan.—Weather fair and crops growing well.

Thomas.—Fine growing week; all spring crops doing well; most of the winter wheat doing well also.

Trego.—Barley, oats, rye and grass made a fair growth past week; much larger acreage of corn going in than for years.

Gove.—Wheat thin but stooling some; good prospects for plums.

Wallace.—Grass fine for grazing; wheat, barley and oats not doing well, too dry; corn planting but too dry to germinate.

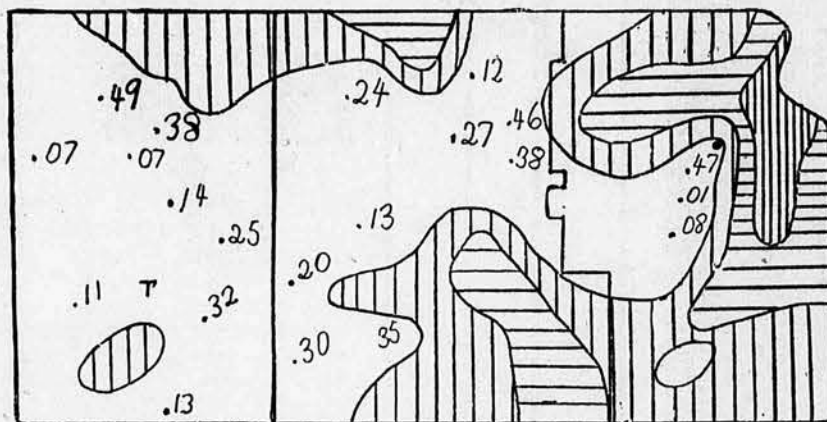
Ness.—Prospects for crops, not damaged by dust storms, were never better in last seventeen years.

Greeley.—No rain this spring; grass more advanced than usual, and stock in good condition, but no crop prospect yet.

Ford.—All crops look well; fruit prospects bright.

Finney.—Oats and barley doing well; the weak wheat fields dying; garden crops forging ahead finely.

Grant.—Small grain and grass at a standstill; ground too dry to plow; no planting being done.



Scale of shades less than 1/2 1/2 to 1 1 to 2 over 2

ACTUAL RAINFALL FOR WEEK ENDING MAY 4.

barley looking well; prospect good for fruit.

Dickinson.—Corn planting finished; oats not doing well; gardens and fruits look well.

Saline.—Oats and corn doing as well as they can; wheat improved some since the showers.

Marion.—Corn a good stand; pastures and fruit good; oats very good; wheat little over half crop.

McPherson.—Our rains have revived everything; fruits had fallen badly.

Barton.—Getting very dry for oats and barley; wheat suffering badly; listing corn still in full progress; pastures and alfalfa good.

Harvey.—Wheat now looking splendid and promises a good crop; corn a good stand; oats could not be better; fruit first-class.

Reno.—Hope revived, as well as crop prospects; fruit has fallen badly.

Stafford.—All crops were feeling the dry weather but have greatly revived since the 3d.

Sedgwick.—Everything growing rapidly; corn, oats and grass look promising but are needing more rain.

Kiowa.—High wind has filled up lister furrows and blown out some oats and barley; need rain very badly.

Cowley.—Considerable corn has not germinated yet; prospects improved by rains of April 30 and May 3; wheat on bottom has commenced to head.

Sumner.—Since the rain vegetation has started again; wheat very small, improving now.

WESTERN DIVISION.

Grains of all kinds are in good shape in the northern counties, though a much larger acreage has been put in corn than for years. Grass is doing finely generally and stock is thriving

Stanton.—Dry and windy; grass drying up except on cultivated ground.

Meade.—Barley, oats and wheat in fine condition; rain of the 3d did much good to crops all over the county; fruits very promising.

Barber.—Fine growing week, with pastures in fine condition; good prospects for all kinds of grain except wheat; fruit good promise.

Kansas Department of Agriculture.

Secretary Coburn, of the Kansas Board of Agriculture, issued last Monday the board's first crop report of the season, being a careful digest of statements made by a corps of conservative and closely observant correspondents in every county of the State, as to conditions on April 30. In the concrete this shows as follows:

Winter Wheat.—The acreage sown last fall is estimated as having been 4,064,137 acres, or about 11 per cent. less than that sown the preceding year. By unfavorable weather conditions 53 per cent. of this, or 2,154,000 acres have been rendered practically worthless, and at least 47 per cent. of the whole will be planted in other crops, especially corn, and the sorghums—largely for forage and grain. The only counties venturing to report winter wheat as in "good" or "fair" condition are Atchison, Brown, Dickinson, Douglas, Franklin, Johnson, Linn, Marshall, Miami and Nemaha, and even in some of these it is evident such conditions are found only in limited districts. All reports indicate that it is the "hard" wheats, commonly designated as "Turkey" or "Russian," which best withstand the vicissitudes of Kansas winters, whether too cold, too wet or too dry. Chinch bugs are reported in many counties in the east-

ern third of the State, and likely to do much damage unless checked by wet weather. Kansas expects little from her wheat crop of 1895.

Spring Wheat.—The land in spring wheat is put at 132,150 acres, or 20 per cent. less than one year ago, and the present average condition is given as 70 per cent. Counties reporting the condition as "good," or "100," are Marshall, Phillips, Norton, Rooks, Rush, Sherman and Thomas, with rather the best reports from Rooks.

Corn.—The area which will be devoted to corn is put down as from 18 to 20 per cent. more than in 1894, approximating an increase of 1,250,000 acres, or a total of 7,655,000 acres. The most of this has been planted in good season; in many localities it is well up, being cultivated, and very promising, while in other sections lack of moisture has retarded germination and growth, which recent rains will now greatly expedite.

Oats.—The acreage sown to oats shows an increase of fully 11 per cent., or 157,018 acres, over last year; a total of 1,585,000 acres. The condition, as compared with a full average, is 83 per cent.

Rye.—The area seeded to rye in 1894 was 131,134 acres. The estimate for 1895 is 166,540 acres, an increase of 27 per cent. Condition, 70 per cent.

Sorghums.—The interest in the sorghums for forage and grain is a rapidly growing one in Kansas, and the increase of acreage to be given up to them the present year is reported at not less than 25 per cent.

Grasses.—Are generally more forward this season than common, and affording early pasturage; yet, as with other growths, lack of seasonal rainfall has up to this time checked the grasses materially.

Fruit.—The prospect for a large crop of apples, peaches and cherries could not be better. Vines of the grapes and canes of the blackberries and raspberries have been damaged by winter in a few sections, but a plentiful yield of fruit is expected. Considerable planting of fruit trees in many localities.

General Rains.—The foregoing is all based upon conditions existent on or immediately prior to April 30, but it is proper to say that since then rains, the most copious in many months, have fallen, and are still falling over extensive areas in Kansas, and these, if continued, of course, presage one of Kansas' great crop seasons.

KANSAS FARMER and Semi-Weekly World (N. Y.), you can have for \$1.65 one year.

We can furnish you KANSAS FARMER and Peterson's Magazine, each one year, for \$1.75. Or KANSAS FARMER and Arthur's Home Magazine for \$1.65. Send to this office amounts above named.

We have recently sent out a good many "Handy Cobbler" outfits, and shall be pleased to hear from those who have received them as to how they are pleased. If satisfactory it is a pleasure to know it, and if not satisfactory we want to be informed of the facts in detail.

Every farmer in Kansas, and especially the breeders and stock-raisers, should have the greatest live stock journal in the world, the Breeder's Gazette, of Chicago, price \$2 a year. We make a special offer of it and the KANSAS FARMER, both papers one year, for only \$2. Subscribe now through this office.

Many of our subscribers desire a daily newspaper. In renewing your subscription it is well to note the fact that we can furnish you a year's subscription to KANSAS FARMER and daily Kansas City Star for \$4. Or, KANSAS FARMER and daily Leavenworth Times for \$3. The amount for both papers to be sent to this office.

The KANSAS FARMER has in stock about 2,000 Spray Calendars, giving concise directions as to time and manner of spraying every kind of fruit. They are very neat and are suitable to hang up for convenient reference. Any one sending a two-cent stamp to pay for mailing and postage will receive a Spray Calendar free.

Horticulture.

The Fruit Bark Beetle.

New specimens of fruit-destroyers are constantly being discovered. The latest is the fruit bark beetle, an immigrant from Europe. It is said to be the worst of all the vast army of insects with which the orchardists have to combat. So far it has attacked the apple, pear, peach and plum, and it goes about its destructive work in a methodical and premeditated sort of way, which slowly but eventually kills the tree.

First it bores straight into the bark, then makes a burrow lengthwise, and lays its eggs inside the borings. When these hatch, the larvae eat the wood under the bark, and when grown go on with the work of boring, sometimes deep into the sap wood. Here they change into the chrysalis state, and finally emerge through holes in the bark full grown. When all this has happened, a man begins to wonder what is the matter with his tree, and attributes its damaged state to blight, which, by the way, is a term often covering many inexplicable and unknown diseases.—*Exchange.*

Potatoes to Plant an Acre.

EDITOR KANSAS FARMER:—The potato crop for 1895 is now probably all planted, and we will all eagerly read the experience of others.

My own experience has somewhat startled me, as I have never before planted just as I have at this time, nor have I ever read of a similar test. The best authorities I have ever read say that five to ten bushels of seed per acre is about right, and S. A. Thomas says that of course there is a limit to the amount of seed, but adds that he has never yet reached it. Now, if such veteran growers as he have not yet reached the limit, what is an amateur to think?

Last fall I screened my whole crop, and all potatoes that would not pass through a two and one-half inch screen were stored by themselves for my own seed. While I never practiced planting the smallest tubers, yet I have always heretofore selected medium seed, but this year I desired to use the whole crop for seed, and as the Early Kansas potato is liable to grow too large to suit some, I decided to plant very close, cut to one eye and, of course, get all the seed I could on an acre. Many of my customers have asked me how much seed it took for an acre, and I always replied "from six to ten bushels." I did not then know just how much it was possible to get on, but do now, as on land that was surveyed, with large seed cut to one eye and put exactly 14x30, it took sixteen bushels per acre, or double the amount of plant food that small potatoes would give. My nearest neighbor planted an acre of the same kind and used five bushels of seed.

CLARENCE J. NORTON.
Morantown, Kas.

Management of Berry Pickers.

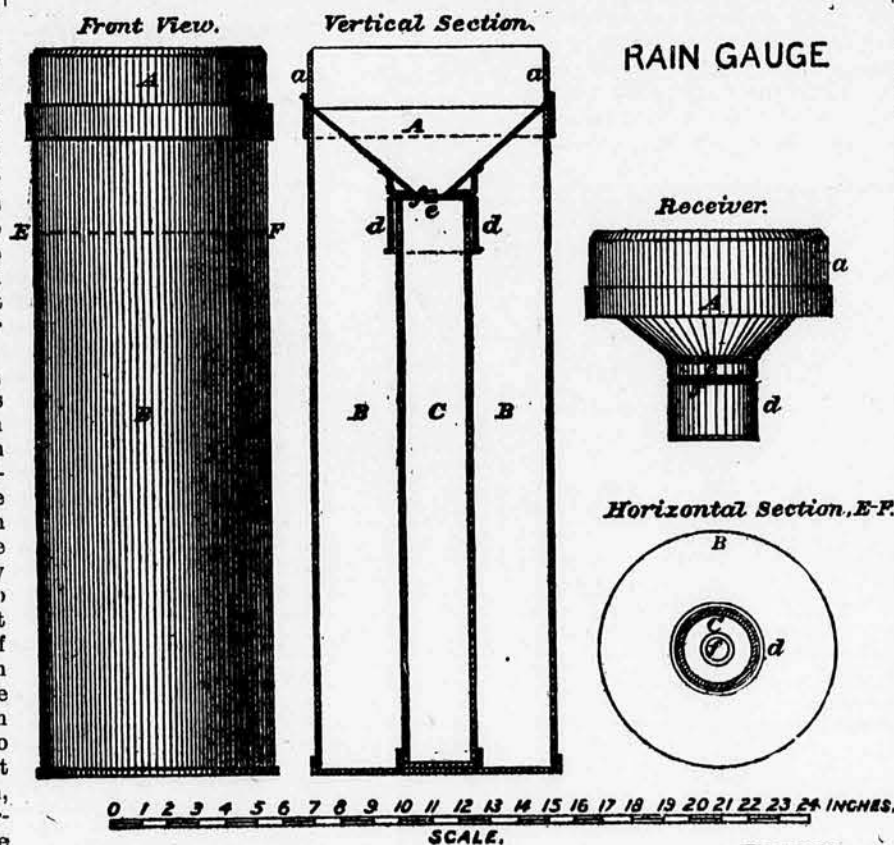
EDITOR KANSAS FARMER:—I see, under the above heading, in the April number of the *American Horticulturist*, that Mr. H. D. Barrington, of Barclay, and B. F. Smith, of Lawrence, tell how they manage, or how they keep tally with their pickers. As we have had about twenty-five years experience along that line, it might be of some benefit to your many readers to give our way of keeping tally. We used tickets for quart boxes for several years and found them a nuisance, both to grower and picker. We have used the ticket enclosed for several years. It has given perfect satisfaction to us and the pickers. We give each picker a ticket with a string tied in the hole, so they can tie it to a button or in a button-hole, so as to get at to be handy to punch. We use a conductor's punch. We furnish each picker with a picker's crate that holds six berry boxes. When a picker returns a crate full to the packing-room he gets one punch opposite the number 6. That counts for six boxes. If he have but one box, the ticket is punched opposite figure 1. So you see one punch in number 6 counts six times

as many as in number 1 and three times as many as in number 2, and so on. If a picker has eight boxes, give one punch in number 6 and one punch in number 2. As the ticket numbers from 1 to 6, one ticket will answer for several hundred boxes, if pickers want to let it run that long. Every picker understands that his ticket has to be punched when his crate is delivered at the packing-room or he loses his picking, so there is no chance for mistakes. We have not had any trouble about keeping tally of boxes since using this ticket. A quick boy or girl can attend to a large number of pickers. Instead of counting out six tickets, as Mr. Smith's man does, we give one punch, which is done as quickly as to hand out a ticket. We think this plan of keeping tally is good for a small grower or one that has 250 or more pickers—the more pickers the better. When we give a ticket out we write the picker's name on the back with ink, so if it is lost the finder cannot draw the pay. Any one wanting one of our picker's tickets for a sample can have it by sending a stamp to pay postage.

D. G. WATT & SONS.
Spring Grove Fruit Farm, Lawrence, Kas.

Measuring the Rainfall.

EDITOR KANSAS FARMER:—Would you please give, in KANSAS FARMER, some time soon, a description of how the men that tell us how much rain falls measure it? I have



THE STANDARD UNITED STATES RAIN GAUGE.

for years been catching rain in a gallon can. Some folks say I cannot get a correct catch of rain, because if a rain comes with a wind it does not present the same-sized surface as when rain falls nearly or altogether straight down. How do they count snow, as it would take several inches to make an inch of water when melted?

Would there be any advantage here in this sandy land to use a subsoller?

Have any of your readers ever tried putting coal oil over seed corn to keep moles away? I put coal oil over some corn, supposing that it would kill the germ, but it did not.

B. F. GEHMAN.

Hutchinson, Kas.
[This inquiry was referred to the Director of the United States Weather Service for Kansas, who answers as follows.—EDITOR.]

In answer to Mr. Gehman's questions, would say that he is correctly informed regarding measurement of rain falling in high winds. The top of Weather Bureau standard gauge is a circle eight inches in diameter, and when rain is falling straight down, the gauge cuts a round hole in (so to speak) eight inches in diameter, but the more obliquely the rain is driven by the wind the more oval the hole becomes, until, in a strong wind, the "hole" may become a mere slit eight inches long and possibly less than an inch wide. No gauge has yet been invented that will overcome this difficulty. A "can," to be used as a rain-gauge, must have straight sides, with no dents in, and must run straight to the top, not flare

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The Leading.

One of the leading and best known painters in this country says, "I cannot afford to use anything but Pure White Lead" (see list of brands). Every practical painter knows this. It is only those who haven't any reputation to lose who don't know it, or will use misleading brands of White Lead or unknown worthless mixtures. Although low-priced, they are not cheap. Pure White Lead is the cheapest, because it is the best.

If colors are required they are easily made by using the National Lead Co.'s Pure White Lead tinting colors. Pamphlet and color-card sent free.

NATIONAL LEAD CO.,

1 Broadway, New York.

ing like a bucket, and the top should be sharp.

Snow varies in the amount of water it contains, but averages about one inch of water to ten inches of snow. Heavy, wet snow has been known to contain an inch and a half of water to ten inches of snow, while light, dry snow runs less than an inch. T. B. JENNINGS.

reason that hay does not lay in the swath to sunburn and lose its color, and is quickly loaded and without dirt or trash or breaking the leaves and blossoms of clover, alfalfa, etc. The "Keystone Chief" Side Delivery Rake can be started just as soon as the first hay cut is ready to windrow and can be kept just that distance behind the mower. It often saves a tedder, because it makes a light, loose windrow in which the hay quickly dries. The windrow can be made any desired size by turning into it any number of swaths. The windrow is straight and goes clear around the field, saving all sharp turns with either the rake or the wagons with the loader. It is the only side rake that is simple and strong and durable. It will rake light or heavy hay and rake cleaner than any dump rake ever made, and it does not take dirt and trash under the stubble. Then when ever the first hay raked is ready the loading can begin and be done just as rapidly as you please with the "Keystone" loader. It has a capacity to put on the wagon a ton in five minutes but the work can be done as much slower as you please. Where help is scarce, we have known a boy or girl to drive and one person load, and even one person alone do the driving and loading by stopping the team till hay on the wagon is placed. It does not take up dirt or trash. It has no jerking or violent motion, therefore "Keystone" loaders that have been in use ten and fifteen years are common. The draft is so light that extra horses are not used on the wagon. The "Keystone" is the only loader that will load hay from cocks.

In a large field, the loading at the outside, the raking further in, and the mowing still further in may all be going on at the same time. In a small field, the team can be taken from the mower and used on the rake and afterwards used on a wagon.

If you wish to push the haying and make first quality hay, it will pay you to send to the Keystone Manufacturing Co., Sterling, Ill., for their free pamphlet, "Quick Haying." They have branch houses in different parts of the country.

Removal of Ticket Office of New York, Chicago & St. Louis (Nickel Plate) Railroad.

On May 1, the Chicago city ticket office of the New York, Chicago & St. Louis railroad (Nickel Plate Road) will be moved to No. 111 Adams street, opposite the post-office.

J. Y. CALAHAN,
General Agent.

Homes for the Homeless.

The opening of two Indian reservations in northeastern Utah to settlers opens up over three and one-half million acres of fine agricultural and stock-raising land for home-seekers.

The Uintah and Uncompahgre reservations are reached by the only direct route, the Union Pacific system, via Echo and Park City. E. L. LOMAX, G. P. & T. A., U. P. system, Omaha, Neb.

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and Bicycles, at Factory Prices. Work guaranteed and 20 to 40 per cent saved. Our goods received the highest awards at the World's Fair. Our 1895 Mammoth Illustrated Catalogue is free to all. It shows all the latest styles and improvements and reduced prices. It has 200 pages and is the largest and most complete catalogue ever issued. "A" Grade, \$45. "B" Grade, \$37.50. Write to-day. Send for it. It's free. Alliance Carriage Co., Cincinnati, Ohio.

Broke the Record
No Cultivator ever had such a remarkable run the first season. Sales nearly 20,000 in 1894
and this year will be greatly increased. The C. H. D. is simply the best Walking Cultivator ever made and as yet has no imitators. It sells at sight. For sale by one dealer in a town. See it before you buy. Write us for illustrated circular.
Deere & Co. MOBILE

In the Dairy.

Conducted by A. E. JONES, of Oakland Dairy Farm. Address all communications Topeka, Kas.

About Feeds.

EDITOR KANSAS FARMER:—The question of feeds for dairy cattle, viewed from its various standpoints, is one on which a great many can and do disagree. One sees all manner of suggestions as to the best milk and butter-producing foods, while the experiment stations burden us with innumerable tables, formulas and ratios. Feeding cannot be an exact science. We may have accurate analyses of feeds, but the feeding question includes also the matter of price, the branch of dairying followed, and the very important consideration of whether we purchase or produce the feed. In a general way it is safe to advise a dairyman to produce as much as possible on his own farm. Yet this must be governed somewhat by the size of the farm. Intensified farming is the order of the day. Some of the small dairy farms are wonders in this respect, and the man who is making dairying a side issue—and a much-neglected one at that—by keeping only a few ill cared for cows on a good sized farm, is astonished at the man who can keep a goodly number of cows on a small farm.

In the matter of feeds one must not be too eager to try everything he hears recommended, nor yet too conservative. Ensilage has evidently come to stay, as shown by the number of silos built, and one finds any number of dairymen advocating ensilage as the greatest help in feeding dairy stock. Others put equal trust in roots, and the late A. L. Crosby predicted that we would have a "root renaissance." The same writer was also an advocate of "cow peas," better known, perhaps, in the South than the North. New clovers and forage plants come before the public from time to time, the merits of which can be better determined after a few years experience and experiment. An alleged new forage plant called sacaline has attracted attention of late and according to some authorities is of doubtful value.

Various mill products and by-products are well-known factors in feeding dairy stock, among them cottonseed and linseed meals. Cottonseed meal is said to impart a firm grain to the butter, a fact not to be overlooked in warm weather. Then let it be remembered that every pound of cottonseed meal brought onto the farm adds to its fertility. And when we remember, also, that dairying naturally exhausts the fertility of the soil less than any other branch of agriculture, we can understand that it is possible to increase rather than diminish the fertility of the land by a judicious system of dairying.

In the Eastern States the corn crop has always been cut and the stalks saved as regularly as the corn itself. Such has not been the practice in the Western States, except, perhaps, for the past few years, and then only to a limited extent in certain sections. But last summer the severe dry weather in the Western States caused farmers to cut their corn and save the stalks, and the lesson they learned will not be forgotten by them, as they have found corn stalks good food, especially for dairy cows. Of course, the better condition in which they are saved and cured the more valuable they are.

F. W. MOSELEY.

Clinton, Iowa.

The Meanest Man on Earth.

Mrs. Kate Busick, the noted owner and breeder of Jerseys, and platform lecturer as well, has found a mean man, meaner than all before him, and shows him up as follows, in an exchange. Of course he was a butterine-maker:

"I was most forcibly impressed with a rather unique advertisement the other day, and it set me to thinking. It was the well-known picture of the trim dairymaid with her milk pail, leading a Jersey cow (no mistaking that animal) and underneath in flaring type, the legend, 'Jersey Butterine,' followed by a setting forth of the su-

perior(?) merits of the union, hog-grease and tallow, as a substitute for butter. Well, I don't wonder that a man can be found these days mean enough to drag the counterfeit presentment of a woman and a Jersey into a counterfeit product of the slaughter-house; but it 'riled' me considerably to think how the best things in life can be prostituted to such vile uses."

Mr. Craig, of the Hillsboro creamery, has made out a statement of the profits of dairying as shown at his creamery for the month commencing September 19 and ending October 19, says the *Independent*, of Hillsboro, Ore. The amount of milk received was 15,121 pounds, which made 1,212 pounds of butter. This was sold in Portland at 33 cents per pound, wholesale. The net price of the butter, after deducting all expenses, was 24.16 cents per pound. The amount of milk required to produce one pound of butter was 20.8 pounds, which is lower than any creamery heard from in this vicinity. The milk averaged a little over \$1 per 100, and one patron, whose milk was from Jersey cows, netted him \$1.34 per 100.

Dairying is fast becoming a prominent industry in central Kansas. Farmers are finding out that supplying milk to the creameries is a sure income that drought and crop failures can not materially affect. One of the important things is to utilize everything that grows on the farm. In ordinary years vast quantities of rough feed goes to waste (and as much more could be raised with small expense) that could be turned into money by keeping cows and becoming creamery patrons. To do this successfully it is necessary to have cows with unusual milk-producing qualities. It is a loss of time and feed to bother with an indifferent or poor milker. Keep good cows, give them close attention and you can figure on a steady and profitable income the year around.

Announcement of the University of Kansas State Geological Survey.

EDITOR KANSAS FARMER:—In conformity with the law under which the University of Kansas is now working, the Board of Regents, at a recent meeting, formally organized the University Geological Survey of Kansas, with Chancellor F. H. Snow, *ex officio* Director; Prof. S. W. Williston, Paleontologist; Prof. Erasmus Haworth, Geologist and Mineralogist, and Prof. E. H. S. Bailey, Chemist.

In addition to these, other members of the University faculty will be engaged upon the work of the survey, as well as the advanced students of the departments of geology and paleontology. An effort will also be made to centralize and unify the energies of different geologists in the State who have been doing valuable work along different lines of geological investigations. Already a considerable start has been made and the co-operation of different geologists of the State has been secured.

The policy of the survey will be conservative, with the expectation that it will be continued and eventually include all other branches of the natural history of the State. The general stratigraphy of the State will first be elaborated in order that it may be used in the further study of various questions of economic and scientific importance, all of which will be taken up as rapidly as existing conditions from time to time will permit.

Work in the coal measures of the State has been in progress for two summers, and volume I. of the report is now almost ready for publication. Other volumes will appear at irregular intervals. Those already under preparation are: One on "Coal, Oil and Gas;" one on the "Vertebrate Paleontology of the State;" and one on the "Salt and Gypsum Deposits of Kansas."

F. H. SNOW,

Chancellor University of Kansas.
Lawrence, Kas., April 20, 1895.

Farmers, while butter is so low and cheese high in price, why not send \$1 to C. E. Kittinger, Powell, S. D., for his rennets and instructions for making cheese at home without other apparatus than you now have. Any woman can make cheese while attending to household work. The process is very simple and success certain. Mr. K. offers to refund the dollar to all who fail while following his instructions, and says no one has ever yet asked to have it refunded.

HAVE YOU FIVE OR MORE COWS?



If so a "Baby" Cream Separator will earn its cost for you every year. Why continue an inferior system another year at so great a loss? Dairying is now the only profitable feature of Agriculture. Properly conducted it always pays well, and must pay you. You need a Separator, and you need the BEST—the "Baby." All styles and capacities. Prices, \$75. upward. Send for new 1895 Catalogue.

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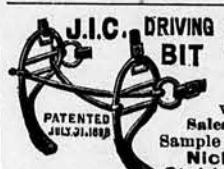
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Sample mailed XC for Nickel, \$1.50. Stallion Bits 50 cts. extra.

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What untold mischief these do cause us all!

Perhaps you have a half-formed notion of buying a binder, reaper or mower—and it's not a McCormick. You decide upon a machine which, you remember, showed up very favorably in a draft test—but you forget what sort of a "test" it was.

You remember the agent said his machine "is just as good as the McCormick."

You remember the McCormick is a little higher in price—

But you forget that the

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was on hand ready to meet any and all competition in the World's Fair field tests—tests in which all American machines were urged to take part.

You forget that the machine you think of buying did not obtain its draft figures in these tests with the McCormick—in the same field and under the same conditions.

You forget that the McCormick is higher priced only because of its higher quality.

Write the McCormick Harvesting Machine Co., Chicago, or call on their local agent.



Invited to send for my latest price list of small fruits. Half million strawberry plants, 300,000 Progress, Kansas and Queen of West raspberry plants. B. F. Smith, Box 6, Lawrence, Kas. Mention this paper.

A. H. GRISEA, Prop'r Kansas Home Nurseries, Lawrence, Kas., grows trees for commercial and family orchards—the Kansas Raspberry, Blackberries, standard and new Strawberries—also shade and evergreen trees adapted to the West.

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For further particulars address, PERINE'S FLOW WORKS, Topeka, Ka.

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The Greatest Railroad on Earth—

Santa Fe Route!

Teachers and others going to National Educational Association meeting at Denver, in July, should remember that the Santa Fe offers as low rates as anybody else, with better service. Special inducements to small or large parties.

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CHICAGO.

Most Picturesque Line to Colorado.

In writing to our advertisers please say you saw their advertisement in the KANSAS FARMER.

Gossip About Stock.

In this week's issue is advertised Onstad's Lumpy-Jaw Capsule, a harmless and effectual remedy for lumpy-jaw in cattle. The testimony of stockmen who have used it is that it is invariably a sure cure. This remedy is made and for sale by Onstad Chemical Co., Sioux Falls, S. D.

D. P. Norton, Council Grove, writes: "I have this week sold the bull calf Commodore to F. Uhl, of Pawnee, Okla. He is a fine son of Imp. Buccaneer. His great-granddam was the Countess of Benvenue, by Warfield's great show bull, Muscaton 7057. His grandsire was the fine Rose of Sharon bull, Duke of Sharon 59604. His great-grand sire was Magistrate 27153, bred by Wm. Warfield, got by 2d Duke of Grasmere, he by Muscaton. We hope to have him inspected by the stockmen of Pawnee and vicinity."

The receipts of horses at the Kansas City horse market were quite liberal, with a marked improvement in the class of horses offered, but there were not enough buyers for the good ones to create a healthy competition, and this class was a little off from last week's prices. We think this only temporary and wholly occasioned by the fact that most of the regular Eastern buyers had not time to get around after their recent shipments. There were several buyers from Texas, Arkansas, Tennessee and Alabama, which made Southern stock sell rather better than for the past two weeks. Everything indicates a good demand for the better classes of horses.

DR. ORR'S BOOK.—Readers of the KANSAS FARMER will be pleased to know that arrangements have been made whereby they can obtain this concise and well high invaluable "Farmer's Ready Reference or Handbook of Diseases of Horses and Cattle" in combination with this paper at a slight saving in cost.

The separate prices of these are:

Dr. Orr's Book.....\$1.25
KANSAS FARMER, one year.....1.00
Total.....\$2.25

Two dollars sent either to the Kansas Farmer Co., Topeka, or to Dr. S. C. Orr, Manhattan, will secure both, making a saving of 25 cents.

The attention of our readers interested in poultry is called to the reduction price for eggs offered by Mrs. Thos. W. Ragsdale, whose "ad." is elsewhere in this issue. She reports having sold over 2,400 eggs for setting this season, and among her late shipments were settings to California and an order was filled for 100 dozen to Illinois parties for incubator hatching. From now on she will ship twelve turkey eggs for \$3; Light Brahma, \$2 for fifteen, and Plymouth Rock, \$1.50 for setting of fifteen. The visitor at the farm and those acquainted with the exhibits made and the prizes won at the World's Fair, the Missouri State show and other poultry exhibitions, will recognize that Mrs. Ragsdale ranks up with the foremost of American poultry breeders. She desires to extend her acquaintance with Kansas people and proposes entire satisfaction to all her customers.

Among the breeders of the West, no one is coming faster to the front than is Mr. George W. Null, of Odessa, Mo. The writer paid his farm, Elm Lawn, a visit lately, and found the poultry division of the farm's breeding operations in excellent condition. The reader will see, on reference to his "ad." elsewhere in this issue, that the Mammoth Bronze turkeys score right up with the best on record, and that he is now sending out eggs at about half price. The large pen of twenty-six Cornish Indian Games are a very interesting flock, large in size, of excellent plumage, score 92½ to 93½, and these eggs go now for \$2.50 per fifteen, instead of \$5. There are two pens of high-class Light Brahmas and two pens of Barred Plymouth Rocks. These birds are all selected ones and score from 92 to 94½. Shipments have gone this season to a dozen States and Territories. The farm lies near Odessa, thirty miles east of Kansas City, on the Chicago & Alton railway, which makes it convenient to ship to Kansas patrons.

Mr. W. A. Bailey, of Calista, Kas., reports his Poland-China herd in excellent condition, with forty-five pigs of last fall's farrow and thirty spring pigs, with seven more litters to hear from. The pigs sired by Cunningham's Choice 13781 S. are exceedingly fine. This boar is from the World's Fair grand sweepstakes herd of Cunningham & Mugg, of Indiana, and at present weighs 500 pounds, and his pigs are grand indeed. "My other herd boar, Royal King 11894 S., is a strong Butler-bred on his sire's side and from a choice Graceful sow bred by Ed. Klever, of Ohio, which combines two of the best herds of Ohio. He is a choice individual and has proven himself an excellent breeder. He will be 3 years old in August; has plenty of bone, extra ham, good in back, and, in fact, is good all over, with nice coat. His pigs have given good satisfaction. My sows are royally bred and first-class and have been

selected with great care to secure the most important features attainable in the Poland-China hog. With this combination of breeding I am prepared to furnish true blue breeding that are all right. I have been several years in selecting my herd, have taken pains to get the best breeding the country affords, hence I take pleasure in offering my hogs to the public."

The Star Spangled Banner's Author.

Many interesting things about Francis Scott Key—the author of the "Star Spangled Banner"—are contained in a pamphlet, which may be obtained free, from the Key Monument Association, of Frederick City, Maryland, by sending one 2-cent stamp for postage. This association is raising funds for a suitable monument to the poet, and they suggest, that in the schools and everywhere, upon or before Flag Day (June 14), this subject be suitably recognized. Contributions, however small, are asked for. Every one who loves the flag ought to have some small share in building this monument. The Governor of Maryland has strongly endorsed the movement. The names of all contributors will be preserved in the crypt of the monument, and published (without amount) in the history of the monument when completed.

American Hereford Record.

We are in receipt of Vol. XIV. of the American Hereford Record, which contains entry numbers from 55001 to 60000, inclusive, with illustrations of prominent representatives of the breed, such as Ancient Briton 55749 (15034), Coconut 40726, New Year's Gift 55769, Hesiod 2d 40679, Petunia 3d 27417 and Bright Duchess 15th 51821. The volume also gives the names of the officers and members of the association, as well as a detailed list of Herefords exhibited at the World's Fair in the various classes. Any further information desired may be had by addressing the Secretary, C. R. Thompson, Independence, Mo.

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DR. U. B. MCCURDY, Veterinary Surgeon. Graduate Ontario Veterinary college, Toronto, Canada. Can be consulted on all diseases of domestic animals at office or by mail. Office: 114 West Fifth Street, Topeka, Kas.

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FARMS WAY DOWN.

I have excellent farms in Rooks county, Kansas, for sale, way down below their value. Will sell on contract for one-tenth down and one-tenth yearly, or will give deed if one-fourth or more is paid down. Write for particulars and state how much you can pay down and how you want the balance of payments. I also have several unimproved farms in central Nebraska and one large body of over 7,000 acres. I have a finely improved ranch of 1,440 acres in Rooks county, Kas. Any or all of above will be sold very low, or might exchange part or all of it for good improved property in Chicago or vicinity. Address

B. J. KENDALL,

601 Masonic Temple, CHICAGO, ILL.

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KANSAS LAW BOOKS, ETC.,

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Please say you saw this ad. in this paper.

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WE HAVE THE LARGEST STOCK IN THE WEST
AND SELL THE BEST GOODS FOR LESS THAN
INFERIOR GRADES USUALLY COMMAND

EGG CASES AND FILLERS

Pine, Cottonwood & Poplar

From 8 cents, K.D. to 26 cents filled.

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For Net Seasonable Price 1st Address

CREAMERY PACKAGE MFG. CO.
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THE UNION STOCK YARDS, CHICAGO.

(Consolidated in 1865.) The largest live stock market in the world. The center of the business system from which the food products and manufactures of every department of the live stock industry is distributed.

Accommodating capacity: 50,000 cattle, 200,000 hogs, 30,000 sheep, 5,000 horses. The entire railway system of Middle and Western America center here, rendering the Union Stock Yards the most accessible point in the country. The capacity of the yards, the facilities for unloading, feeding and reshipping are unlimited. Packing houses located here, together with a large bank capital and some one hundred different commission firms, who have had years of experience in the business also an army of Eastern buyers, insure this to be the best market in the whole country. This is strictly a cash market. Each shipper or owner is furnished with a separate yard or pen for the safe keeping, feeding and watering of his stock, with but one charge of yardage during the entire time his stock remains on the market. Buyers from all parts of the country are continually in this market for the purchase of stock cattle, stock hogs and sheep. Shipper should ask commission firms for direct information concerning Chicago markets.

The Greatest Horse Market in America, the Dexter Park Horse Exchange.
N. THAYER, President. JOHN B. SHERMAN, Vice President and Gen. Manager. J. C. DENISON, Secretary and Treasurer.
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The Kansas City Stock Yards

are the most complete and commodious in the West,

and second largest in the world! The entire railroad system of the West and Southwest centering at Kansas City has direct rail connection with these yards, with ample facilities for receiving and reshipping stock.

	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts, 1894.....	1,772,545	2,547,077	589,555	44,237	107,494
Slaughtered in Kansas City.....	969,646	2,050,784	387,570		
Sold to feeders.....	308,181	11,496	69,816		
Sold to shippers.....	409,965	468,616	45,730		
Total sold in Kansas City, 1894.....	1,677,792	2,530,896	503,116	28,903	

CHARGES: YARDAGE, Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head. HAY, \$1 per 100 lbs.; BRAN, \$1 per 100 lbs.; CORN, \$1 per bushel.

NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED.

C. F. MORSE, General Manager. E. E. RICHARDSON, Secretary and Treasurer. H. P. CHILD, Assistant Gen. Manager. EUGENE RUST, Gen. Superintendent.

Bonner Springs Nurseries

Apple trees, 2 and 3 years old, strong, \$6 per 100; \$15 per 1,000. Concord Grapes, \$1.25 per 100; \$10 per 1,000. Asparagus, 2 year, strong, \$3 per 1,000. Strawberry plants, 50c. per 100; \$3 per 1,000. Cherry and Pear, 20c. each; Plum, 15c.; Apricot, 15c.; Peach, 10c. Blackberries, \$8 per 1,000. Hardy Hybrid Perpetual Roses, 2 year, strong, 15c. each; \$1.25 per 10. Climbing Roses, 2 year, 15c. per 10. \$1. Thirty Greenhouse or Bedding Plants, \$1—all different. Cabbage and Tomato Plants, 25c. per 100; \$2 per 1,000. Plants by mail or express. H. H. KESN, Manager, Bonner Springs, Kas.

Big Book Bargains.

Books at Less than the Original Cost of the Paper.

We have the following special lot to close out for cash, all prepaid to your express office:

Ten sets Americanized Encyclopedia Britannica, full cloth, latest edition, ten volumes; regular price \$21.50, now.....\$11 25
Ten sets same, half morocco, regular price \$20, now.....10 00
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Two, The American Encyclopedia of Practical Knowledge, one large volume, full sheep binding, 1,322 pages, fully illustrated.....3 65
Three, Childhood—Its Care and Culture. An invaluable book for the home. 772 pages, fully illustrated, cloth.....2 10
Thirteen volumes Irving's Conquest of Granada, beautifully illustrated, with English cover.....1 35
Thirteen volumes Irving's Alhambra, beautifully illustrated, with English cover.....1 35
One set Grant's Memoirs, two volumes, cloth.....4 40
One Mulhall's Dictionary of Statistics, 632 pages, valuable reference book.....8 25
Seven White House Cook Book, large 8vo, white oil cover.....1 50
Eleven Napheys' Physical Life of Women, cloth, 426 pages, a valuable home book... 1 00
Fourteen Napheys' Transmission of Life, 362 pages of information for women.....1 00
Thirteen sets Works of Abraham Lincoln, two volumes, cloth, Nicolay and Hay edition, regular price \$10, now.....6 25

We have also many choice books for home and school libraries at remarkably low prices.

Who will secure the above prizes? When this lot is sold we cannot fill orders. Send money with order—we will pay the freight. Correspondence asked.

Kellam Book and Stationery Co.

603 KANSAS AVENUE,

TOPEKA, KANSAS.

THE STRAY LIST.

FOR WEEK ENDING APRIL 24, 1895.

Labette county—J. F. Thompson, clerk.

HORSE—Taken up by Mary Shortridge, in Oswego tp., March 3, 1895, one dark bay horse, 9 years old, no marks or brands; valued at \$35.

FOR WEEK ENDING MAY 1, 1895.

Atchison county—Chas. H. Krebs, clerk.

TWO COLTS—Taken up by Amos Rasch, in Grasshopper tp. (Muscaton P. O.), two colts—one bay, with white star on forehead, the other black, both 3 years old; valued at \$14 each.

Cherokee county—P. M. Humphrey, clerk.

PONY—Taken up by Charley M. Yount, in Garden tp., P. O. Galena, in April, 1895, one iron-gray mare pony, fifteen hands high, 5 years old, left hind and fore feet white.

Montgomery county—John W. Glass, clerk.

MARE—Taken up by P. M. Lee, in Cherokee tp., one brown mare, 3 years old.

MARE—By same, one bay mare, 3 years old.

MULE—Taken up by S. M. Smith, in Cherry tp., one bay mare mule, fourteen hands high, 2 years old; valued at \$25.

MARE—Taken up by James Gullkey, in Cherokee tp., one bay mare, fifteen hands high, three white feet, white in forehead and on nose.

FILLY—Taken up by C. Dickey, in Rutland tp., one brown filly, 4 years old, white spot in face.

FOR WEEK ENDING MAY 8, 1895.

Morris county—June Baxter, clerk.

PONY—Taken up by C. F. Anderson, in Four Mile tp., one sorrel mare pony, about 6 years old, white spot in forehead, white hind feet; valued at \$20.

MARE—By same, one bay mare, about 5 years old, white spot in forehead, right feet white, branded on right hip with figure 4; valued at \$25.

Osage county—E. C. Murphy, clerk.

MARE—Taken up by S. C. Peterson, in Olivett tp., P. O. Osage City, April 18, 1895, one roan mare, four feet four inches high, branded with a key on left shoulder; valued at \$11.

Cherokee county—P. M. Humphrey, clerk.

MARE AND MULE COLT—Taken up by Joseph Harwell, in Spring Valley tp., one sorrel mare and mule colt, mare weighs 700 pounds, hind feet white, star in forehead; valued at \$20.

COLT—Taken up by J. R. Hodson, in Garden tp., one dark bay horse colt, fourteen and a half hands high, 3 years old.

Rush county—W. J. Hayes, clerk.

MARE—Taken up by P. A. Wright, in Belle Prairie tp., six miles southwest of Plavias, April 20, 1895, one sorrel mare, 3 years old, a heavy scar on right shoulder, left hind foot white, no brands; valued at \$25.

Chichester's English Diamond Brand.

PENNYROYAL PILLS

Original and Only Genuine.

SAFE, always reliable. LADIES ask

Druggist for Chichester's English Dia-

mond Brand in Red and Gold metallic

boxes, sealed with blue ribbon. Take

no other. Refuse dangerous substitu-

tions and imitations. At Druggists, or send 4c.

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"Relief for Ladies," in letter, by return

Mail. 10,000 Testimonials. Name Paper.

Chichester Chemical Co., Madison Square,

Sold by all Local Druggists. Philada., Pa.

Ask your neighbor to subscribe for the

KANSAS FARMER.

The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER. Give age, color and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. Sometimes parties write us requesting a reply by mail, and then it ceases to be a public benefit. Such requests must be accompanied by a fee of one dollar. In order to receive a prompt reply, all letters for this department should be addressed direct to our Veterinary Editor, Dr. S. C. ORR, Manhattan, Kas.

SORE HEAD.—A steer was dehorned six months ago, but fails to heal. It breaks and runs matter every two or three months. H. W. J. Gradan, Kas.

Answer.—Examine the sore to see if any pieces of loose bone remain in the wound. Clean out the cavity and inject once a day for three days a little of the following: Sulphate of copper, 1 teaspoonful, dissolved in one pint of water, after which apply to the sore every day or two a little of the following: Pine tar, 1 ounce; acetate of copper, 1 ounce; carbolic acid, 3 drachms; lard, 12 ounces; mix.

COUGH IN MARE.—I have a mare that has been coughing for about two years and has been worse for the last two weeks. Sometimes a yellow discharge runs from the nose when she drinks. O. Q. Narka, Kas.

Answer.—Have your mare examined by a competent veterinarian; if the discharge from her nose proves to be nothing serious, give her, for the cough, a tablespoonful of the following twice a day: Powdered bloodroot, anise seed, fenugreek, nitrate of potash and Jamaica ginger, of each 4 ounces, mixed.

TUMORS ON PIGS.—I had some pigs castrated in the usual way that have tumors growing on the sac from which the testicles were taken. What can I do for them? Is the flesh of such animals fit for food after they are healed? Neola, Kas. N. J. R.

Answer.—The tumor is not on the sac but on the end of the cord, probably from leaving it too long. It should be separated from the healthy tissue and removed as in castration, or if there is danger of bleeding it may be corded. The flesh will be all right when the wound heals.

APOPLEXY IN PIGS.—My pigs have a good appetite and appear to be doing well, but they have fits or something of the kind. They may be standing eating, or walking around, and drop as suddenly as if knocked in the head, kick for a few minutes, then get up and stagger a little, then be all right again. I have lost four or five. Beloit, Kas. W. M. C.

Answer.—Your pigs have apoplexy, probably from too high feeding, or it may come from an inferior quality of feed. Reduce their feed and turn them out on grass where they can take plenty of exercise if not already out. Put Epsom salt in their swill, beginning with an ounce to each pig and increasing the dose every day till their bowels are well opened.

Horse Owners! Try



GOMBAULT'S Caustic Balsam
A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.



TOUGH ON FLIES
Instantly and positively prevents flies, gnats and insects of every description from annoying horses and cattle. It improves the appearance of the coat, dispensing with fly-nets. Applied to cows it will give them perfect rest, thereby increasing the quantity of milk. It is also a positive insecticide for plants. We guarantee it pure, harmless and effective. Recommended by thousands using it. One gallon lasts four head an entire season. Price, including brush, quart cans, \$1.00; half-gallon, \$1.75, and one gallon, \$2.50. Beware of imitations. Made only by The Crescent Manufacturing Co., 2109 Indiana Avenue, Philadelphia.

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in the world,
is experience.

The Lorillards have been manufacturing tobacco continuously since 1760. Do you wish to profit by this experience?



The brand that for years has been the standard of high grade tobaccos.

'Tis a rich, lasting and delicious chew.

It's LORILLARD'S
Sold everywhere.

MARKET REPORTS.

Kansas City Live Stock.

KANSAS CITY, May 6.—Cattle—Receipts since Saturday, 2,782; calves, 31; shipped Saturday, 1,558 cattle; 189 calves. The market was active at 10 to 15c higher on native steers and 15 to 20c higher on good Texas steers. The following are representative sales.

DRESSED BEEF AND SHIPPING STEERS.					
17.....	1,533	\$5.50	27.....	1,270	\$5.45
3.....	1,266	5.45	101.....	1,193	5.35
6.....	1,193	5.20	20.....	1,233	5.20
61.....	1,298	5.03	7.....	1,202	5.00
24.....	1,118	5.00	21.....	1,170	4.95
4.....	1,152	4.40	1.....	790	4.50
19.....	965	4.25	5.....	1,022	4.21
1.....	960	4.15	4.....	1,027	3.75

TEXAS AND INDIAN STEERS.					
19 cmt.....	1,365	\$4.60	23 cmt.....	983	\$4.35
246 cmt.....	1,033	4.20	64 cmt.....	1,149	4.35
74 I.....	1,104	4.40	50 I.....	880	3.90
41.....	1,033	4.25	26.....	881	3.90

WYOMING STEERS.					
87.....	1,248	\$4.35	41.....	1,268	\$4.05
56.....	1,266	4.05			

COLORADO COWS.					
8 hf.....	1,006	\$3.75	3.....	795	\$2.50

SOUTHWESTERN STEERS.			
27.....	842	\$3.75	

27.....	842	\$3.75			
TEXAS AND INDIAN COWS.					
28.....	843	\$3.25	33.....	779	\$3.10

35 g h f.....	645	3.00	1.....	960	3.03
12.....	1,292	2.80	20.....	765	2.80
60 gf.....	708	2.35			

12.....	1,292	2.80	20.....	765	2.80
60 gf.....	708	2.35			

30.....	763	4.15	1.....	1,040	4.03
1.....	1,000	4.00	1.....	1,030	4.00

5.....	1,050	3.50	10.....	1,098	3.45
29.....	719	3.40	1.....	1,100	3.40

1.....	1,050	3.15	2.....	1,550	3.00
1.....	900	3.00	1.....	990	3.00

5.....	1,020	2.65	5.....	802	2.65
1.....	630	2.60	1.....	1,100	2.50

4.....	497	2.45	1.....	440	2.40
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1.....	630	2.60	1.....	1,100	2.50
4.....	497	2.45	1.....	440	2.40

6.....	493	3.15	40.....	513	3.05
1.....	950	3.00	2.....	725	2.50

Hogs—Receipts since Saturday, 4,319; shipped Saturday, 759. The market was steady to 5c lower. The following are representative sales:

53.....	303	\$4.60	178.....	314	\$4.60	73.....	257	\$4.55
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69.....	283	4.55	62.....	276	4.55	59.....	298	4.55
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59.....	283	4.55	50.....	264	4.50	69.....	242	4.50
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38.....	260	4.50	147.....	257	4.47½	83.....	229	4.47½
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32.....	256	4.45	36.....	240	4.45	44.....	265	4.45
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60.....	235	4.45	81.....	218	4.45	83.....	210	4.45
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75.....	227	4.45	82.....	216	4.40	51.....	227	4.40
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80.....	220	4.40	86.....	208	4.40	59.....	218	4.40
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43.....	240	4.40	10.....	225	4.40	58.....	230	4.40
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63.....	216	4.40	25.....	244	4.40	83.....	214	4.40
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45.....	166	4.35	74.....	212	4.35	80.....	205	4.35
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67.....	230	4.35	109.....	202	4.35	71.....	199	4.35
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66.....	191	4.32½	77.....	191	4.32½	92.....	165	4.32½
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94.....	182	4.30	72.....	194	4.30	84.....	193	4.30
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20.....	166	4.30	08.....	171	4.27½	46.....	180	4.25
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65.....	173	4.25	26.....	147	4.25	70.....	190	4.25
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98.....	160	4.22½	19.....	124	4.15	34.....	125	4.15
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20.....	127	4.15	72.....	147	4.15	69.....	138	4.15
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Sheep—Receipts since Saturday, 2,012; shipped Saturday, 240. The following are representative sales:

36 Ariz.....	92	\$3.00	250 Ariz.....	82	\$3.00
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412 Ariz.....	83	3.00	156 Ariz.....	82	3.00
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Horses—Receipts since Saturday, 71. The horse and mule market was rather quiet, as usual Monday. There are a number of buyers in town and on account of short supply a good strong market is looked for this week.

St. Louis Live Stock.

ST. LOUIS, May 6.—Cattle—Receipts, 2,600; shipments, 200; market stronger but slow for natives and active and 10c higher for Texans. Export native steers, \$5.80@6.10; good to choice

DISSTON'S



It will pay you to buy a Saw with "DISSTON" on it. It will hold the set longer, and do more work without filing than other saws, thereby saving in labor and cost of files. They are made of the best quality crucible cast steel, and are

FULLY WARRANTED.
For Sale by all Dealers.

Send for Pamphlet or Saw Book, mailed free. HENRY DISSTON & SONS, Philadelphia, Pa.

shipping, \$1.00@5.75; fair to medium, \$1.30@4.85; light, \$3.75@4.25; cows, \$2.25@3.50; fed Texas steers, \$3.75@4.90; grassers, \$2.75@3.75; cows, \$2.00@3.00. Hogs—Receipts, 3,700; shipments, 1,500; market 5c off; tops sold at \$4.65, with bulk of sales, \$4.50@4.60; light, \$4.40@4.60. Sheep—Receipts, 3,330; shipments, 470; market firm for good; dull and weak for poor stuff; some heavy native wethers brought \$1.50; fair, mixed, \$4.20; light clipped natives, \$3.50; spring lambs, \$5.00@5.50.

Chicago Live Stock.

CHICAGO, May 6.—Hogs—Receipts, 25,070; official Saturday, 9,937; shipments, Saturday, 5,303; average weight for the past week, 223 pounds; average weight for the previous week, 223 pounds; left over, about 6,800; quality fair; market moderately active with light lots weak and other grades strong at Saturday's closing prices. Sales ranged at \$4.35@4.80 for light; \$4.30@4.45 for rough packing; \$4.30@4.75 for mixed; \$4.50@4.85 for heavy packing and shipping lots; pigs, \$3.50@4.55.

Cattle—Receipts, 9,500; official Saturday, 135; shipments Saturday, 243; market firm and 5c 10c higher.

Sheep—Receipts, 10,000; official Saturday, 494; shipments Saturday, 3,099; market steady

Chicago Grain and Provisions.

	May 6	Opened	High'st	Low'st	Closing
Wht.—May....	62½	62½	61	61	61
July.....	63½	63½	62½	62½	62½
Sept.....	63½	64	62½	62½	62½
Corn—May....	49	49½	48½	48	49
July.....	49½	50	49½	49½	49½
Sept.....	49½	50½	49½	49½	49½
Oats—May....	28½	28½	28½	28½	28½
July.....	28½	28½	28½	28½	28½
Sept.....	28½	28½	28½	28½	28½
Pork—May....	11 80	11 80	11 80	11 80	11 80
July.....	11 95	12 00	11 85	11 95	11 95
Sept.....	12 12½	12 15	12 05	12 12½	12 12½
Lard—May....	6 52½	6 55	6 52½	6 52½	6 52½
July.....	6 62½	6 67½	6 62½	6 65	6 65
Sept.....	6 80	6 85	6 80	6 80	6 80
Ribs—May....	6 00	6 00	6 00	6 00	6 00
July.....	6 05	6 10	6 02½	6 10	6 10
Sept.....	6 22½	6 25	6 17½	6 25	6 25

Kansas City Grain.

KANSAS CITY, May 6.—There was little demand for wheat here to-day. A few bids, a cent below Saturday's prices, were made. Samples were generally held for more. There was not much wheat on sale.

The demand for wheat is entirely local now, so that quotations on the basis of Mississippi river are not practicable.

Receipts of wheat to-day, 27 cars; a year ago, 33 cars.

Sales of car lots by sample on track, Kansas City: No. 2 hard wheat, nominally 63c; No. 3

hard, nominally, 62c; No. 2 red, nominally, 64c; No. 3 red, nominally, 63c; No. 4 red, 1 car 62c; rejected, nominally, 60c.

Corn was in fair demand at about Saturday's prices. Offerings are increasing a little and the demand appears to be improving somewhat.

Receipts of corn to-day, 17 cars; a year ago, 73 cars.

Sales by sample on track, Kansas City: No. 2 mixed corn, 5 cars 44½c; No. 3 mixed, 1 car, 44c; No. 4 mixed, nominally, 43½c; No. 2 white, 5 cars, 46½c; No. 3 white, nominally, 45½c.

Oats were pressed for sale and met with almost no demand at all. A car of choice oats was sold at 28c, but that was a cent more than was bid for any others.

Receipts of oats to-day, 7 cars; a year ago, 10 cars.

Sales by sample on track, Kansas City: No. 2 mixed oats, nominally, 28c; No. 3 oats, nominally, 26c; No. 4, nominally, 25½c; No. 2 white oats, nominally, 31c; No. 3 white oats, nominally, 30c.

Hay—Receipts, 38 cars; the market is steady. Low grades are very hard to sell. Timothy, choice, \$3.75@3.85; No. 1, \$3.00@3.50; No. 2, \$2.00@2.50; fancy prairie, \$3.00@3.50; choice, \$2.00@2.50; No. 1, \$3.00@3.50; No. 2, \$4.00@5.50; packing hay, \$3.00@4.00.

Kansas City Produce.

KANSAS CITY, May 6.—Eggs—Receipts, light; strictly fresh, 10½c per doz.

Poultry—Receipts rather light and market about steady. Hens, 6½c; springs, \$1.00@5.00 per doz.; roosters, 15c. Turkeys are scarce; gobblers, 7½c; hens, 8½c. Ducks, steady, 7c. Geese, dull and not wanted; alive, 4@4½c. Pigeons, firm; \$1.00 per doz.

Butter—Market weak on account of increasing supply. Extra fancy separator, 17c; fair, 15c; dairy, fancy, firm, 13c; fair, 8@10c; store packed, best, 10c; fair, sweet packed, 8c; packing, old, 4@5c; stale butter finds no sale.

Strawberries—Rather large supply on sale. Indian territory and Arkansas, fresh stock, \$1.75@2.25 per case; holdover stock, 50c up, according to quality.

Fruit—Apples, supply moderate; market steady on good apples; best fancy stand, \$5.00@7.00; common to choice varieties, \$2.00@4.00.

Vegetables—Potatoes, the market steady, firm; ordinary kinds, common, 40@50c per bu.; sweet potatoes, red, supply good, market slow, 25@30c per bu.; yellow, 25@30c per bu.; Utah and Colorado, market fair; choice mammoth pearl, white, best, 70@75c; No. 2, 60@65c.

In writing to our advertisers please say you saw their advertisement in the KANSAS FARMER.



YOUR WOOL is not our **WOOL**. But your **INTEREST** is our **INTEREST** when you ship us your wool, and when any firm makes their shippers interest they will succeed as we have done in the wool business. Our Success has electrified the wool houses in this market. Our **PROMPT SALES AND QUICK RETURNS** have astonished and pleased our shippers. We have fully demonstrated that it is not necessary to wait three to six months before making returns for wool. We frequently make returns in that many days. Don't dispose of your wool until you write for our Wool Report and see our prices and the testimonials of our shippers. Let us hear from you. REFERENCE: Metropolitan National Bank, Chicago, and this paper.

SUMMERS, MORRISON & CO. 174 SOUTH WATER STREET, CHICAGO, ILL. COMMISSION MERCHANTS.



MONEY can be made and saved by corresponding with us before you arrange to market your season's clip of wool. Our 29 years of experience in the business makes it possible for us to substantiate this statement. Our reliability is vouched for by all the commercial agencies and numerous Chicago banks and business houses. We charge you smaller commission and still get you larger returns, because being the largest wool house in the west, we can supply the largest manufacturers with any amount of stock at any time. We furnish sacks free to all our shippers, honor your sight drafts with original bill of lading attached, make you liberal advances on consignments and give you the latest and best information on the wool situation in our circular letter. Write.

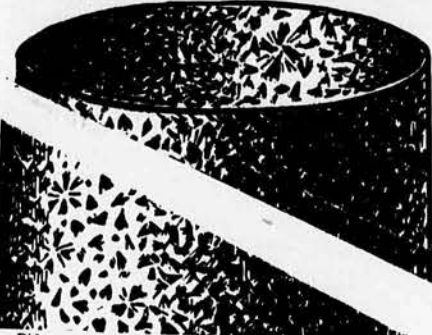
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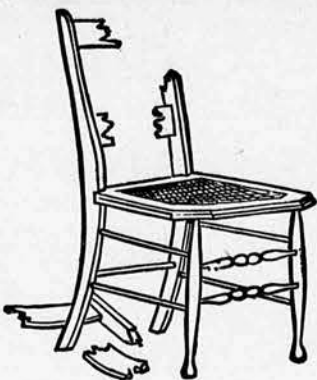


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"A MONEY MAKER AND SAVER." A double Grinder with three burrs. Center draft. Can be attached to any make of pumping wind mill. **E. B. WINGER,** 632 Kenwood Terrace, Chicago, Ill.

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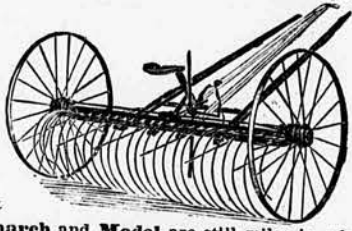
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Just as yours will be if you continue using poor soap.

CLAIRETTE SOAP.

makes wash-day as easy as any other day. Lessens the labor, makes the clothes white, and does no damage. Thousands of women say so—surely they are not all mistaken. Sold everywhere. Made only by **The N. K. Fairbank Company, - St. Louis.**

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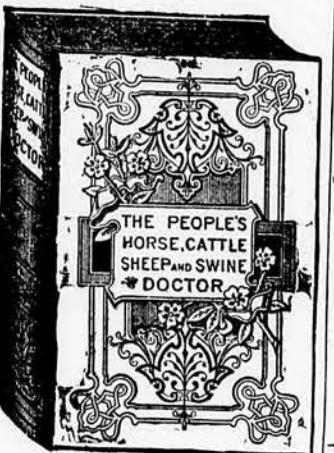


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THE PEOPLE'S



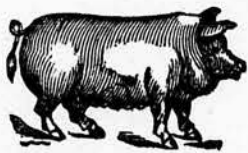
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CATTLE,
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Containing in four parts clear and concise descriptions of the diseases of the respective animals, with the exact doses of medicine for each. A book on **diseases of domestic animals**, which should present a description of each disease and name, the proper medicines for treatment in such condensed form as to be **within the means of everybody**, has long been recognized as a desideratum. This work covers the ground completely. The book embodies the **best practice** of the ablest Veterinarians in this country and Europe, and the information is arranged so as to be **easily accessible**—an important consideration. Each disease is first described, then follows the **symptoms** by which it may be recognized, and lastly is given the **proper remedies**. The different medicines employed in all diseases are described and the doses required are given. The book is copiously **illustrated**, including engravings showing the shapes of horses' teeth at different ages. An elaborate index is a valuable feature.

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And all Diseases of the Rectum cured by **Drs. THORNTON & MINOR**, Kansas City, Mo. without knife, ligature or caustics—no fee accepted 'till patient is cured. Other Specialties: Diseases of the Skin and Women. Ask for our circulars. They contain testimony from leading business men and high officials—tell how to avoid quacks, sharpers and doctors who ask for fees or a note in advance. **OFFICES: 30-31-32 Bunker Building, 100 West Ninth Street.**

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Personally conducted weekly parties leave Chicago every Saturday evening, and Kansas City every Sunday noon, for Pacific Coast, via Santa Fe Route. Special agents and porters in attendance. Pullman tourist sleepers are used, furnished with all conveniences for comfortable traveling. Second-class tickets honored.

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Through Sleeping Cars Kansas City to Jacksonville.

Commencing Sunday, November 18 1894, the **MEMPHIS ROUTE**, Kansas City, Fort Scott & Memphis Railroad, will inaugurate a through sleeping car line, Kansas City to Jacksonville, via Memphis, Birmingham, Atlanta and Macon, arriving at Jacksonville at 9:45 a. m., making close connections there for all points in South Florida. The cars in this line will be strictly first-class in all their appointments and will run every day in the week, leaving Kansas City at 10:30 a. m.

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Through cars to Chicago, St. Louis, Colorado, Texas and California.

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(Continued from page 1.)

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Thoroughbred Duroc-Jersey Hogs

Registered stock. Send for 44-page catalogue, prices and history, containing much other useful information to young breeders. Will be sent on receipt of stamp and address. J. M. STONEBRAKER, Paola, Ill.

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B. R. ADAMSON, Prop., Ft. Scott, Kas.
25 highly-bred brood sows of best strains, headed by Black Dandy 8809 S., Black Stop 10550 S. and Joker Wilkes 12682 S. About 100 selected individuals sold this season. 25 youngsters coming on now for choice. Write or come and visit my herd.

Quality Herd Poland-Chinas.

For first choice pigs from stock producing winners of seven prizes World's Fair. Darkens Quality 2d and Ideal U. S. by Ideal Black U. S. head the herd. Both first-prize winners Kansas State fair 1894. Come or write your wants. Willis E. Gresham, Burrton, Kas.
Secretary Kansas Swine Breeders' Association.

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Winterscheidt Bros., Prop'r., Horton, Kas. Headquarters for Admiral Chip pigs. The great \$250 boar, Admiral Chip 7919, heads the herd, assisted by Kansas Chief 13676, Winterscheidt Victor 13294, Geo. Wilkes Jr. 11893. Also pigs from Orient's Success 27289 and Banner Chief 12714. Sows of following strains: Tecumseh, None Such, Wilkes Admiral Chip, etc. Prices reasonable. Write or come

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Fifteen choice Poland-China sows bred to Mosher's Black U. S. and Faultless Wilkes for sale; ten choice young boars ready to go; six young Hereford bulls. Also eggs for sale from Black Langshans scoring 94 to 95% and from a choice lot of Light Brahmas and Mammoth Bronze turkeys.

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POLAND-CHINAS and Plymouth Rocks. Herd headed by Cunningham's Choice 13731, from the herd awarded grand sweepstakes at World's Fair on boar and sow; Royal King 11874. My sows are royal-bred. Ward A. Bailey, Calista, Kingman Co., Kas.

MARTIN MEISENHEIMER, Registered Poland-China Swine.

Hiawatha, Brown Co., Kas.
20 brood sows, headed by Tecumseh Free Trade 10783 S., assisted by a son of Benton's Last 8827 S. Some of best females bred to Butler's Darkness, Black U. S. Nemo (Vol. 9) and Victor M. Jr. (Vol. 9) Correspondence and inspection invited.

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Breeder of
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All ages for sale. Herd headed by Dandy Jim Jr. and Royalty Medium, a son of Free Trade.

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46 brood sows in herd, headed by Black U. S. Nemo (Vol. 9), Model Wilkes (Vol. 9), Sunset Chip (Vol. 9) and Billy Bundy (Vol. 9). Female lines: All Right, Short Stop, King L.X.L., Wilkes, Free Trade, Wamaker. Aged sows, bred gilts and fall pigs for sale.

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Poland-China Swine, Short-horn Cattle, Light Brahmas and G. L. Wyandottes.
Herd headed by Anxiety 20251 A., assisted by Combination U. S. 13408 and America's Equal 12279. Have some choice fall pigs, both sexes, for sale, and a few Light Brahma cockerels. Eggs \$1 and \$1.50 per setting. Write. [Mention KANSAS FARMER].

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250 head headed by Swi Tecumseh 11929 S., by L's Tecumseh 11413 S. and Billy Wilkes 9369 S., by George Wilkes 6950 S. A public clearance sale on Thursday, February 14, 1895, of 75 sows bred to these and other noted boars. Inspection invited.

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IRWIN & DUNCAN,
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Special:—All orders received for this column from subscribers, for a limited time, will be accepted at one-half the above rates, cash with order. It will pay. Try it!

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ASK for CIRCULARS; if YOUR DEALER HAS NONE SEND TO US FOR THEM.

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CULTIVATES DEEP OR SHALLOW AND LEVELS THE GROUND PERFECTLY.